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**Raising Māori Medium Students'
Academic Oral Language Proficiency
Through Self and Peer Assessment**

A thesis
submitted in fulfillment
of the requirements for the degree

of

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Abstract

In 2012 there were 24,474 year 1 to 8 students being educated in the range of Māori medium bilingual and immersion programmes that exist throughout Aotearoa. This figure made up 25% of the total primary school population.

To ensure the survival of te reo Māori, and the cognitive advantages associated with bilingualism, Māori medium students need to reach a high level of proficiency in both the English and Māori languages over their time at school. They need to develop their language skills beyond basic conversational competency to academic language proficiency.

As well as academic success, Māori medium whānau expect their students to gain a level of competence in te reo Māori that enables them to actively engage in authentic Māori cultural contexts. This is crucial as the interruption to the intergenerational transfer of te reo Māori caused by colonisation means that today Māori medium graduates make up the main pool of speakers who can transmit our language into the future.

Substantial research has evidenced effective pedagogies for supporting students' second language acquisition internationally. However, to date there have been no empirical studies to evidence effective second language pedagogies that can raise Māori medium students' academic language in particular. This study aimed to bridge that gap by providing evidence of effective classroom practices that can raise Māori medium students' academic language proficiency, with a particular focus on oral language competency.

This action research project aimed to raise a group of Māori medium students' academic oral language proficiency through the practice of self and peer assessment. The participants were a group of eight year 5 and 6

students being educated in a level one Māori medium classroom in a mainstream school in Southland, New Zealand.

Over the 20 weeks of the study the students used a newly developed language matrix of writing outcomes to self and peer assess their learning in their literacy programme. The quantitative and qualitative results of the study revealed that the confluence of self and peer assessment practices and the new language scaffolds raised the students' academic oral and written language competency significantly beyond what was normally expected in a Māori medium programme in 20 weeks.

The study findings provide an option for those teachers wishing to develop their Māori medium students' academic Māori language proficiency. The study also highlights the need for further research into Māori language acquisition pathways, to inform Māori medium oral language progressions and associated assessment development.

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Our mother for sharing her stories.

Nā tou rourou nā taku rourou ka ora ai te iwi.

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He tohu maumahara tēnei ki tō mātou kōka a Hine Kino Haua. Nāna mātou i poipoi kia tu pakari ai, tu Māori ai, i roto i tēnei ao hurihuri. Moe mai rā e māma.

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Chapter 1: Introduction

In an urgent quest to reverse the threat of extinction to the Māori language, a small group of Māori parents opened the first Kohanga Reo (Māori language nest) in Wellington, New Zealand in 1982. The subsequent uptake and demand by Māori for bilingual education has been passionately driven. In the space of just 20 years this counter-hegemonic, educational revolution saw the proliferation of Māori medium programmes (programmes where students learn part or all of the curriculum through the Māori language) permeate all levels of the New Zealand education system, from kohanga reo to whare wānanga (Māori tertiary institutions). In 2011 there were 24,474 students enrolled in some form of Māori medium primary schooling throughout the country (Ministry of Education, 2011).

As well as the realisation of our children's academic and social potential, the revival and survival of te reo Māori remains today a priority outcome for Māori medium education. Due to the interruption to the intergenerational transfer of te reo Māori caused by colonisation, today Māori medium graduates form the main pool of leaders who can transmit our language into the future and therefore ensure its survival.

While the social and cultural benefits of the survival of te reo Māori are at the root of the Māori medium educational drive, a number of international research studies have also evidenced the cognitive benefits associated with higher levels of bilingualism (Cummins, 2000; Hammers & Blanc, 2000). However, to access these social and cognitive benefits bilinguals must attain bilingual proficiency to the degree that they can converse at age appropriate levels in both languages including discussing the increasingly decontextualised ideas of the curriculum.

While there are clearly social and academic advantages of bilingualism the Māori medium movement's rapid growth has often outstripped the development of the second language teaching and assessment tools required to support or measure students' bilingual development. Although a range of good quality resources has now been developed to support Māori medium curriculum there remains a paucity of tools developed specifically to support students' academic oral language development in particular. Further, there is currently little empirically researched evidence to inform Māori medium students' oral language acquisition pathways, or the development of respective assessment tools.

Twenty-five years of experience in Māori medium education had led me to believe that a number of Māori medium programmes were producing students who were competent readers and writers of te reo Māori but who were not able to stand and speak at equivalent levels. They were not able to competently discuss the increasingly decontextualised ideas of the curriculum that their whānau expected as a result of their Māori medium schooling, or that were needed to gain the cognitive benefits of bilingualism.

The need for further research into practices that raise Māori medium students' academic oral language proficiency became personally relevant to me while I was teaching in Māori medium classrooms in Southland, New Zealand, between 2005 and 2010. It was my belief that my students were exiting their Māori medium primary school programme at the end of year 6 not having reached their full academic or bilingual potential. I, myself a second language speaker, was challenged to raise my students' academic oral language proficiency so that they could access the curriculum at the advanced levels I knew they were capable of and so that they could communicate proficiently in authentic Māori cultural contexts.

This dilemma of second language teaching and learning prompted the current action research study in my classroom. From previous studies I

knew that formative assessment practices, including self and peer assessment, could raise students' academic outcomes in mainstream schooling. I had also studied the literature on effective second language teaching and learning. Considering these two sets of knowledge together I posited that the practice of self and peer assessment in my students' literacy programme would necessarily provide the conditions that are conducive to effective second language acquisition that have been outlined in the research on bilingual education (Ellis, 2005).

I theorised that the practice of self and peer assessment, supported by new language scaffolds, would require and support students to communicate at the advanced academic levels that I believed they were capable of, and that the research deemed crucial to gain the cognitive benefits of bilingualism. Thus arose the research aim, "Raising Māori medium students' academic oral language proficiency through self and peer assessment".

The results of the 20 week action research study showed that the confluence of self and peer assessment practices and the language scaffold tools developed for the study significantly raised students' oral and written language competency well beyond what was usually expected in 20 weeks of Māori medium schooling. The study findings also highlighted the need for research into Māori language acquisition pathways required to inform students' academic oral language development in Māori medium programmes.

1.2 Thesis Outline

Chapter two of this thesis describes previous research that forms the educational context within which this study was conducted. The chapter begins by briefly describing the background context in which the Māori language was brought to near extinction. It continues with a brief description of the genesis and subsequent development of Māori medium education as a response by Māori to save their language and culture. The

chapter continues with a brief description of the major typologies of bilingual education and where Māori medium models are situated within them. Next the benefits of bilingualism are discussed as they have been evidenced in the research internationally, as well as the implications of that research for Māori medium students and programmes. A summary of research into Māori medium schooling follows, including an outline of the challenges that are still faced. The chapter continues with a review of the research into formative assessment practices, with an emphasis on the practice of self and peer assessment. To conclude I outline my research theory of how self and peer assessment would support the principles of effective second language instruction (Ellis, 2005) to raise my Māori medium students' oral language competency.

Chapter three discusses the action research methodology of this study. First the principles of Kaupapa Māori research are described followed by an explanation of how they formed the guiding framework of this action research study. Next the context of the study is outlined, including the geographical and social environment within which it was conducted, the participants, the study intervention phases and tools, and the qualitative and quantitative methods of data collection.

Chapter four presents the results of the study. Here the significant effects of the intervention on the student participants' oral and written Māori language competency are described in both quantitative and qualitative detail.

A discussion of the results in chapter five considers the research findings as they relate to the literature and theory upon which the research was based. The implications of the study for Māori medium education are discussed next. The chapter concludes with a consideration of the implications the study raises for further research that is required to further develop effective Māori medium pedagogies.

The thesis is concluded in chapter six. This recap prompts the reader to reconsider the aims of Māori medium education and the implications this study confers for stakeholders interested in successful educational outcomes for Māori medium students.

Chapter 2: Review of the Literature

2.1 Introduction

This review of the literature begins with a brief summary of the historical, social and political background within which the Māori language was brought to near extinction. Next, the ensuing emergence of Māori medium education as a response to this threat is recounted briefly. An outline of the typologies of bilingual education is then presented, and Māori medium education models are situated within them, followed by a brief description of their particular characteristics. Research that has evidenced the cognitive benefits of bilingualism is then discussed, followed by a discussion of the implications for Māori medium programmes. The chapter continues by outlining the research that has been conducted into Māori medium education to date, and the challenges that remain. Next a brief description of formative assessment research and practices is outlined, with an emphasis on the component of self and peer assessment as it relates to improved student outcomes. Finally, the principles of second language acquisition advocated in the research are outlined concurrently with my theories of how self and peer assessment could provide the teaching and learning framework to support each of those principles respectively, to raise my students' academic oral language competency in my Māori medium classroom.

2.2 Māori Education Background

Traditional Māori society valued education and maintained various systems for the preservation and dissemination of knowledge. Essential and everyday knowledge and skills were transmitted in real life contexts through practical experience and observation (Best, 1924; Hemara, 2000; Pere, 1991). Higher learning, for those of high rank and standing, took

place in *whare wānanga* and *whare kura*, which are related to mental processes of learning as opposed to physical institutions (Best, 1924; Hemara, 2000; Pere, 1991). The classroom was the world students lived in and their learning took place at any time, in any place. Examples of the types of knowledge transmitted at these higher levels include, but are not limited to, tribal *whakapapa*, astronomy, navigation, agriculture, *whakairo* (carving), and the arts of war and peace (Best, 1924; Hemara, 2000; Pere, 1991). Careful maintenance and transmission of knowledge to new generations was crucial to the survival and prosperity of *iwi* and *hapū* (Best, 1924; Hemara, 2000; Pere, 1991).

With the arrival of Christianity to Aotearoa, Māori were eager to incorporate new knowledge and technologies for their own use. They were particularly eager to advance their literacy skills and by the 1830s were flocking to mission schools to acquire these tools (Jenkins, 1991, 1993; Simon, 1990 & 1992; Simon, Smith. L, Smith. G, McNaughton, Morris Mathews, Smith. W, Pīhama, Hēpari, Tuteao, 1998). They quickly engaged with new ideas and skills and incorporated them into their own knowledge systems to advance their societies (Belich, 1996; Durie, 1998; Jenkins, 1991 & 1993; Kawharu, 1989; Orange, 2004; Simon, 1990 & 1992; Simon, Jenkins & Morris Mathews, 1995; Simon et al, 1998; Waitangi Tribunal, 2013). Māori assimilation of new knowledge and technologies was so successful that by the 1850s Māori in the North Island were dominating trade and commerce and were regarded as one of the richest societies in the world (Bishop & Glynn, 1999; Temm, 1990).

Māori tribal leaders and Crown officials signed *Te Tiriti o Waitangi*, at Waitangi in the Bay of Islands in 1840. This covenant formed the framework for a peaceful co-existence between the growing number of Crown emigrants and Māori. As well as affording Pakeha rights in this new homeland, the treaty guaranteed Māori their continued *tino rangatiratanga* (right to self-determination), including the protection of their language and culture (Belich, 1996; Durie, 1998; Kawharu, 1989; Orange, 2004).

Only two decades later, however, both the colonial government and the Crown had abandoned their treaty obligations in favour of social, political, and economic domination (Belich, 1996; Durie, 1998; Kawharu, 1989, Orange, 2004; Simon, 1990 & 1992, Simon et al, 1998). Despite their best efforts, mission schools operating since the early 1800s had failed to convince Māori to replace their cultural beliefs and practices in their entirety with those of Christianity. By the early 1860s Māori and their culture were officially regarded as an unfortunate hindrance that was getting in the way of the development of the new colonial utopia.

To address this challenge the state education system was developed as a vehicle to assimilate Māori to the more enlightened and civilised ways of the Pakeha. There was however an important caveat. State officials believed that Māori were inherently less cognitively capable than their Pakeha counterparts and therefore needed a differentiated, less challenging curriculum. The curriculum for Māori needed only to prepare them for the domestic manual labour market, to which their limited cognitive capabilities were best suited (Jenkins, 1991 & 1993; Simon, 1990 & 1992; Simon & Smith, 2001, Waitangi Tribunal, 2013.). Assimilationist curriculum aims and their underlying polygenetic beliefs were made clear in a report by the inspector of schools Henry Taylor in 1862:

I do not advocate for the Natives under present circumstances a refined education of 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. (Appendix to the Journal of the House of Representatives, 1862. p.38)

By 1867 the speedy assimilation of the natives was becoming urgent. While debating the 1867 Māori Schools Bill school inspector Hugh Carleton echoed the frustration of state officials 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 Parliamentary Debates (New Zealand Parliamentary Debates (NZPD), 1867, p. 863).

Perhaps fortunately for Māori, extermination of the Māori race was not a fiscally feasible option for the colonial government at that time. Carleton noted that another war against Māori could cripple the colony financially and 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 via an assimilationist, hegemonic curriculum. The Bill was adopted and the resulting Native Schools Act of 1867 marked the official beginning of state controlled education for Māori (Berryman, 2008; Jenkins 1991, 1993, 2000; NZPD, 1867; Simon, 1990; Simon & Smith, 2001; Waitangi Tribunal, 2013; Walker, 1990).

As early as 1862 school inspector Henry Taylor had already identified the Māori language as a major obstacle hindering the State’s assimilationist aims of education. In a report to parliament he advocated the power of the classroom to remove the problem.

The Native language itself is also another obstacle in the way of civilisation, so long as it exists there is a barrier to the free and unrestrained intercourse which ought to exist between the two races [sic], it shuts out the less civilised portion of the population from the benefits which intercourse with the more enlightened would confer. The schoolroom alone has the power to break down this wall of partition. (Appendix to the Journal of the House of Representatives, 1862. E-04, p. 38)

During the 1867 debate on the Māori Schools Bill, Mr Carleton reiterated Taylor’s previous observations about the limiting influence of the Māori language. He advised the parliament that civilising Māori “*through the*

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

From that time on, methods such as corporal punishment were used to discourage the use of Māori language in schools. My own Ngāti Porou mother remembered and recounted to my siblings and me the many instances when she and her peers were smacked for speaking Māori (the only language they knew) in the classroom during the 1930s and 1940s. The prevalence of this type of abuse of Māori children throughout the country has been well documented (Berryman, 2008; Bishop & Glynn, 1999; Spolsky, 2003; Walker, 1990).

Whakaiti (shaming) was also used to enforce the oppression of the Māori language in favour of English. Our mother also recounted on a number of occasions the story of a young boy regarded by the hapū as a very clever boy with much potential, who was left to mimi (urinate) his pants at his seat, in front of his peers, on more than one occasion because he did not know how to ask to go to the toilet in English and asking in Māori was not acceptable. That boy, like thousands of other Māori children, disengaged from the education system and never reached his full academic or social potential.

These cruel and racist practices were to permeate all sites of school-student engagement during my mother's schooling life. The effects on the young people of that time are easily imaginable. Many of the resulting outcomes such as educational underachievement and disengagement continue to affect Māori of that era and their subsequent generations to this day, by way of reduced employment options and social reproduction (Bishop & Glynn, 1999; Codd, Harker, Nash, 1990).

School assimilationist policies and the rapid urbanisation of Māori post World War II were key factors in the significant decline of the Māori

language. According to a 1930 survey of children attending Native Schools, 96.6 percent spoke only te reo Māori at home. By 1960 that number had decreased to 26% (Benton, 1979, 1983). There had been an interruption to the intergenerational transfer of the Māori language and by 1979 the death of the Māori language was being predicted by leading linguists (Benton, 1979, 1983).

The State had clearly endangered Māori children and their language in the compulsory state education system in New Zealand. Māori cultural knowledge, values, language and aspirations had been systematically marginalised by the colonial power. As a result Māori had become frustrated at the failure of the state system to provide educational environments that ensured cultural and linguistic continuity for their children.

2.3 Emergence of Māori Medium Education

In an effort to halt the threat of extinction to the Māori language and to provide cultural continuity for their children Tuhoe leaders opened the first bilingual school in Ruatoki in 1978. In 1982 a small group of Māori parents opened the first Kohanga Reo (Māori language nest) for preschoolers in Pukeatua, Wellington. Within only six years there were well over 500 Kohanga Reo throughout the country (Smith, 1992).

The demand created by the Kohanga Reo movement for Māori medium education at primary school level gave impetus to the opening of the first Kura Kaupapa Māori (Māori medium primary school) in February 1985 (Smith, 1992). By 2012 that number had burgeoned to 276 schools offering Māori medium instruction (at least 51 percent instruction in te reo Māori) to 16,792 students across the country (Ministry of Education, 2011a). There were a further 140,945 students being educated in programmes that offer Māori language as a subject or that teach the

curriculum in the Māori language for up to 50 percent of the time (Ministry of Education, 2011a).

2.4 Māori Medium as a Bilingual Typology

A wide range of bilingual typologies have been created to describe the characteristics of bilingual education programmes that exist throughout the world (Mackey, 1970; Fishman & Lovas, 1970; Skutnabb-Kangas, 1981, 2000). Previous bilingual education typology models (Hornberger, 1991; May, 2008) have been developed further by May and Hill (Hill, 2010) to specifically position Māori medium programmes within them. May and Hill's model is represented below in Figure 1.

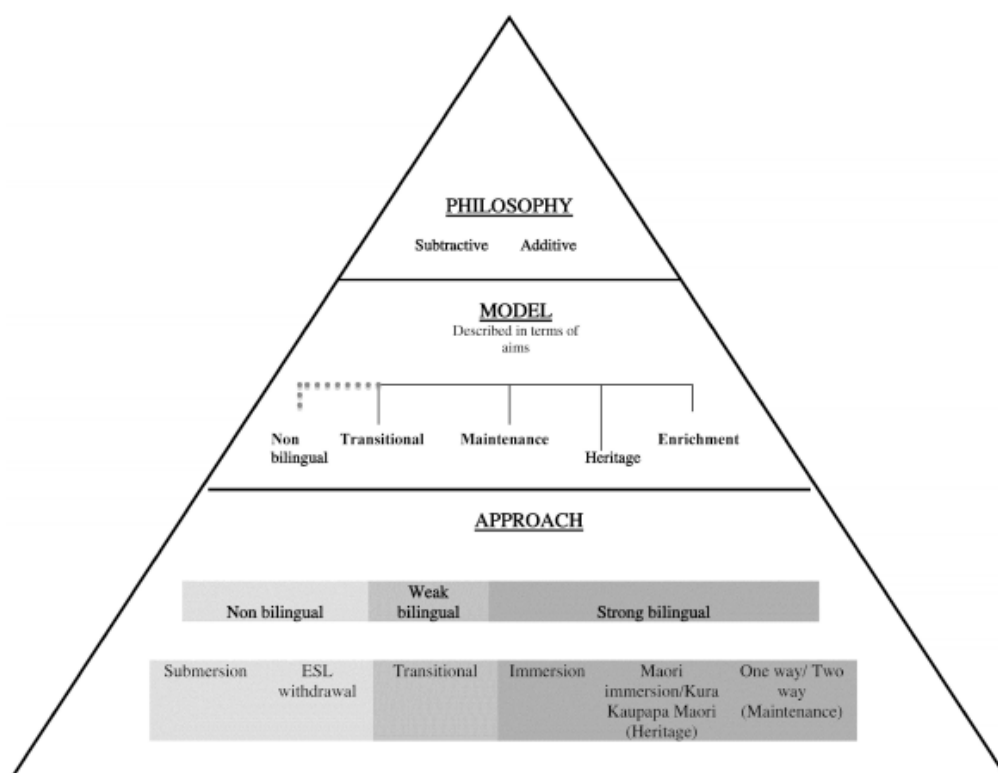


Figure 1. The May and Hill Typology. A derivation of a diagram from May (2008) (Hill, 2010, p.47).

At the highest level, bilingual models of education are underpinned by either additive or subtractive philosophies of bilingualism (Lambert, 1980).

Subtractive models aim to supplant students' first, usually minority, language with the dominant language. Subtractive models are deemed to be weak models of bilingual education. These models usually result in the student becoming monolingual in the dominant language. Transitional programmes in the USA are an example where Spanish speaking students are encouraged to use their first language to help them transition to full monolingualism in English by the end of their schooling. These models have been shown to have detrimental effects on students' academic outcomes (Hill, 2010). Additive models on the other hand aim to add a language to the students' repertoire and are therefore regarded as strong forms of bilingual education. These models can result in cognitive advantages for bilingual students (see 2.5).

The second level of the diagram above describes the specific bilingual models. In transitional models, such as that described above, students are transitioned from their first language to full use of the majority language. As such these are subtractive forms. Moving into the additive forms are maintenance models. In these models students typically belong to a minority group and are supported to develop their first (minority) language to a high level of proficiency. Their first language acquisition then facilitates their acquisition of the majority language. Examples include Welsh in Britain, French Canadian in Canada, and Catalan in Spain (Hill, 2010). Closely related to maintenance models are enrichment models. In most, but not all, enrichment programmes students whose first language is the majority language learn a minority, high status target language in order to maintain it, and often for the social status it confers. French immersion models in Canada, and Welsh-medium schools are two examples of enrichment models where English-speaking students are taught the curriculum through the respective minority languages.

Māori medium bilingual programmes are, in the main, positioned amongst the additive forms. They are situated within the heritage models, which are programmes where indigenous peoples learn or maintain the indigenous

language. Examples include Navajo and Hualapai in the USA; and Inuit in Nunavut, Canada (Hill, 2010).

Due to the interruption to the intergenerational transfer of te reo Māori, Māori medium students are usually taught their minority, indigenous language as a second language. Although similar, heritage models differ from enrichment models in that the target language is not valorised in the wider society.

2.4.1 Māori Medium Settings

Māori medium education encompasses a range of schooling provisions in which the Māori language is used as the language of instruction to varying degrees. Māori medium programmes exist in a range of settings including Kura Kaupapa Māori (Māori medium schools guided by Te Aho Matua) (Ministry of Education 1989, New Zealand Gazette, 2008); Wharekura (secondary schooling); Kura-ā-lwi (tribal schools); total immersion (81%-100% curriculum delivery in te reo Māori) and partial immersion/bilingual (at least 12% curriculum delivery in te reo Māori) programmes which exist within mainstream schools (Hohepa, 2010).

The Ministry of Education funds Māori medium programmes on a four level basis. The highest level of funding goes to level 1 programmes (81-100 percent Māori language instruction) including Kura Kaupapa Māori, and immersion programmes which operate within mainstream schools. Next are level 2 programmes (51-80 percent Māori language instruction). Then Level 3 programmes (31-50 percent Māori language instruction), and finally with least funding are level 4 programmes (12-30 percent Māori language instruction).

Level 1 and 2 programmes, including Kura Kaupapa Māori, receive the highest level of funding because they are considered to be the most effective for producing bilingual students as they meet the minimum requirement of 50 percent curriculum delivery in the target language

advocated in the research to develop bilingualism (Baker, 2006; Lindholm-Leary, 2001). Level 3 and 4 bilingual programmes on the other hand do not meet the minimum requirement of 50 percent instruction in the target language to produce bilingualism (Baker, 2006; Lindholm-Leary, 2001, May et al, 2004). Hohepa (2010) refers level 3 programmes as emerging programmes as they are developing towards the stronger forms of bilingual education (see 2.4).

Māori medium programmes are categorised as early immersion programmes because students usually begin their Māori medium schooling in year 1 and continue through to year 6 or 8, or year 13 in the case of Wharekura. Early immersion provides for the longer exposure to the target language, 6-8 years, that is advocated in the research to produce bilingualism (Cummins, 2000a; Hakuta, Butler and Witt, 2000; Lindholm-Leary, 2001).

2.4.2 Characteristics of Māori Medium Programmes

Bilingual/immersion education is a significant professional field with its own expertise and knowledge. However Māori medium programmes have been developed, under urgency, on gut instinct and a passion for language and cultural revival and continuity, and therefore the extent to which Māori medium programme developments have been based on sound bilingual theory and research varies widely depending on the particular contextual circumstances.

In particular, Māori medium communities, leaders and teachers in any given context will have varying degrees of professional knowledge of bilingual theory or pedagogies. Programmes may or may not be developed with a particular bilingual model or philosophy in mind, and there may or may not be specified pedagogies or outcomes to guide programme curricula.

2.4.2.1 Māori Medium Curricula and Pedagogies

Most level 1 programmes exist within kura kaupapa Māori and Kura-a-Iwi where the whole school ethos is based on either Te Aho Matua (Ministry of Education, 1989, New Zealand Gazette, 2008) or other locally developed principles and guidelines. Other Māori medium programmes exist within mainstream, English medium schools where they often struggle to develop and maintain a separate Māori identity that is understood or accepted as valid by the mainstream staff or leaders (Hohepa, 2010; May, Hill, & Tiakiwai, 2004).

Some Māori medium programmes have adopted Te Aho Matua (Ministry of Education, 1989; New Zealand Gazette, 2008) as their curriculum, albeit very broad, while others have chosen Te Marautanga o Aotearoa - Māori medium curriculum developed by the Ministry of Education (Ministry of Education, 2010a) as their curriculum document. Others advocate the development of a more localised iwi or hapū curriculum, or a curriculum developed by Te Runganui o Ngā Kura Kuapapa Māori o Aotearoa (parent body to Ngā Kura Kaupapa Māori o Aotearoa). However some Māori medium programmes situated within mainstream schools are still at a stage where they simply transfer the unmodified English curriculum, which is not designed for second language contexts.

Regardless of the Māori medium context, teacher proficiency in te reo Māori varies widely between settings. This is a crucial factor for successful bilingual outcomes that has been discussed widely in the research on bilingual education (Baker, 2006; Lindholm-Leary, 2001; May et al, 2004).

Much of the research on bilingualism has advocated the separation of instruction in the students' two languages by either time, teacher, subject, or space (May et al, 2004). This policy is strongly adhered to in most level 1 and 2 Māori medium contexts as it reflects the principles of separation of languages set out in Te Aho Matua. Therefore in many level 1 and 2

settings the use of English as a medium for teaching or learning is strictly limited to formal English language transition programmes which are added to students' curriculum anywhere from year 4 to year 7 or 8 in general (Hill, 2010).

2.4.2.1.1 Translanguage Strategies

Newer research on bilingualism, however, is beginning to challenge the need for separation of languages as outlined above. Instead the research advocates for separation by purpose, for example the stronger language can be used for input such as introducing, clarifying, analysing, or summarising (Baker, 2006; Garcia, 2009) to aid in students' understanding and use of their second language. This strategy is known as translanguageing or transliteracy. Applied in a New Zealand context, a study by Lowman, Fitzgerald, Rapira and Clark (2007) found that students made significant gains in Māori literacy levels when they were encouraged to use English, their first language, to process, problem solve, and analyse Māori texts more deeply. This was the first empirical study of translanguage application in a Māori medium setting. This research is relevant to the current study where translanguage strategies were also found to be effective (see 3.9.1).

2.4.2.2 Māori Medium Students

In the main, te reo Māori is diglossic in New Zealand society and therefore rarely used as a medium of communication in mainstream society (Fishman, 1991). In 2006 only 23.7% of the Māori population said that they could hold an everyday conversation in te reo Māori (Statistics New Zealand, 2011). Māori medium students are therefore usually second language speakers of te reo Māori. They come from diverse family and community backgrounds where te reo Māori may be spoken as a first language (although this is rare) through to homes and communities where English is the only language spoken. Most children begin their Māori

medium schooling with mixed abilities in both languages having had some instruction in te reo Māori at kohanga reo but with English as their first more proficient language (Berryman, 2001; Rau, 2005).

The challenges faced by Māori medium programmes is succinctly summed up by Hill (2010):

The objectives that remain for Māori medium programmes are twofold. First, that the child develop a high level of proficiency in the Māori language - the language that is not supported at home, and taught at school by a predominantly L2 teaching profession. (p.31)

2.5 Bilingual Education Research

The challenge for Māori medium programmes is to produce students who are bilingual. While bilingualism underpins the social and linguistic aims of Māori medium education there is also widespread evidence that bilinguals can attain cognitive advantages over their monolingual peers.

Peal and Lambert's (1962) study of bilingualism and cognition was the first major research project to counter deficit theories of bilingualism, and evidence the cognitive advantages bilinguals had over semi and monolinguals. The study compared the test scores of French monolingual children and French-English bilingual children in Montreal. Although the research was not completely free of weaknesses (Baker, 1988; Bialystok, 2001; Edwards, 2004) it employed a more elaborate experimental design than previous research on bilingualism, closely matching subjects by age, sex, socio-economic level, and language proficiency. The study concluded that bilingual students had greater mental flexibility, they were able to think more abstractly, independently of words, and had superior concept formation (Peal and Lambert, 1962).

Studies following that of Peal and Lambert have continued to provide evidence about the positive effects of bilingualism on cognitive and meta cognitive development (Lee, 1996; Ricciardelli, 1992). Cummins (2000a) advises from his review of research on bilingualism that there have in fact been close to 150 empirical studies that have identified positive effects of bilingualism on students' linguistic, cognitive or academic development.

There are close to 150 empirical studies carried out during the past 30 or so years that have reported a positive association between additive bilingualism and students' linguistic, cognitive, or academic growth. The most consistent findings among these research studies are that bilinguals show more developed awareness of language (metalinguistic abilities) and that they have advantages in learning additional languages. (Cummins, 2000a, p.37)

Hammers and Blanc (2000) concur, "*Altogether the growing body of research suggests that bilingual children reach a deeper level of information processing which leads to a greater metalinguistic awareness and a greater degree of verbal creativity*" (p.89).

There has been an important qualification in the research, however, as to the level of proficiency required in one's second language to attain the identified benefits of bilingualism. Research studies have found that bilinguals must attain a high level of competency in both languages to gain the benefits described above (Mohanty, 1994; Bialystok, 2001).

2.5.1 The Threshold Theory

The distinction between various levels of bilingualism and their implications for students' cognitive development has been explained by the Threshold hypothesis (Cummins, 1976a, 1976b; Toukomaa & Skutnabb-Kangas's, 1977). The Threshold hypothesis describes the student's bilingual development and related cognitive consequences in

the form of a three-tiered house, with each floor (or threshold) representing the child's levels of proficiency in both languages.

At level one (or the first floor) neither of the individual's languages is sufficiently developed to age appropriate competency. If their language competency remains at this level the child will experience negative cognitive effects. Cummins (1976b) describes this level of language acquisition as semilingualism.

At the second or middle floor the child's first language is developed to an age appropriate level while their second language is less developed. The Threshold hypothesis posits that at this level of bilingualism there are likely to be no significant negative effects for the child. Children at this level will be able to operate competently in the classroom in their more developed language.

At the third level of the Threshold theory, the top floor of the house, are the children who are termed 'balanced bilinguals'. At this level children have age appropriate competence in two or more languages. Here students can cope with the curriculum material in either language. It is once bilinguals have reached this level of proficiency that they can benefit from the cognitive advantages of bilingualism outlined above. At this third level of bilingualism Cummins (2000b) further defines the proficiency distinction by explaining that bilinguals have moved beyond Basic Interpersonal Conversational Skills (BICS), more recently referred to as conversational proficiency (Cummins, 2000b). They have now acquired Cognitive Academic Language Proficiency (CALP), or academic proficiency (Cummins, 2000b) in both languages.

2.5.2 Conversational Versus Academic Competency

With conversational competency students have acquired everyday conversational skills. They can engage in conversations that are cognitively undemanding, such as conversations between individuals that

are supported by contextual cues like shared knowledge and body language. Academic competency on the other hand enables students to communicate in context reduced situations such as academic studies that require higher order thinking like evaluation, analysis and synthesis (Cummins, 2000b).

Researchers have discovered in their studies on bilingual education that it takes five to eight years to acquire academic proficiency in one's second language (Cummins, 2000; Hakuta, Butler and Witt, 2000). However much of this research was conducted in contexts where the target language was spoken outside of the school, unlike the Māori medium, New Zealand context.

Cummins (2000a) summarises the benefits of developing students' bilingualism when advising that *"the continued development of bilingual children's two languages during schooling is associated with positive educational and linguistic consequences"* (p.175).

2.6 Māori Medium Research

Māori medium education development has been founded on gut instinct, hard work, and a passionate drive to provide cultural and linguistic continuity for our tamariki and mokopuna. The survival of te reo Māori remains a paramount aim. However, the movement has developed at such a rapid rate that it has often outstripped the research needed to underpin sound second language teaching and learning practices or the development of resources needed to support them.

Early research into Māori medium education found that initially there were a number of gaps in assessment practices and teacher pedagogical knowledge (Hollings, Jeffries, & McArdell, 1992; Education Review Office, 2002). These gaps were often due to teachers having to use English

medium methods to assess Māori language literacy development, and their limited knowledge of second language acquisition pedagogies.

In a report to the Ministry of Education in 2001 (Bishop, Berryman, & Richardson, 2001) researchers were again alerting to “*a lack of empirically sound Māori language benchmarks (which) means that teachers have no reference points from which to develop language expectations for their students*” (p.2). Almost 10 years later the same ministry was repeating the same message, that there remains a need for quality assessment resources in Māori medium settings (Ministry of Education, 2010c).

From the late 1990s onward a small number of Māori educationalists have begun to conduct research to inform the development of supports available to Māori medium practitioners. In particular, a levelled junior reading series has been developed, as well as programmes and assessment tools to support and measure early literacy and numeracy progress (Bishop et al, 2001; Berryman, Walker, Reweti, O’Brian, & McDonald, 2002; Ministry of Education, 2011b; Rau, 1998, 2003, 2004, 2005).

However 30 years after the inception of Māori medium education, there remains to this day no empirically researched pathways, resources or benchmarks to inform or support advanced academic oral language development in particular. This is despite the acceptance that oral language proficiency is a prerequisite to further literacy development (Aldridge, 2005; Cambourne, 1998; Clay, 1998; Glynn, Wearmouth, & Berryman, 2006; Rau, 2006; Vygotsky, 1962).

The challenge faced by Māori medium teachers is to develop second language students’ talk beyond basic interpersonal communication, such that they can discuss the increasingly decontextualised ideas of the curriculum. This includes discussing abstract academic ideas with increasing complexity. The task is all the more challenging given that most teachers are themselves second language speakers with varying degrees

of te reo Māori proficiency. The challenge is further compounded by the limited opportunities for reinforcement of, and engagement in the Māori language outside of the classroom (Rau, 2004; May et al, 2004; May & Hill, 2005).

Māori people in New Zealand, like indigenous peoples throughout the world, have had their language systematically marginalised from mainstream society, and from education in particular. Consequently, most Māori students need to learn their own language as a second language, embedded within a dominant and monolingual (English) language environment, both at school and in the wider community. However, most of these students also lack access to a parent generation that speaks Māori fluently. Such a precarious situation calls for new and effective approaches to the reclaiming of indigenous and other languages. (Berryman & Glynn, 2003, p. 77).

My own experiences participating as a whānau member and teaching in Māori medium settings over the past 20 years has echoed these concerns. More recently, while teaching in a year 4 to 6 Māori medium level 1 classroom I became aware that my students were not reaching the levels of academic language proficiency that they were capable of. I believed that this was the result of the underdeveloped second language teaching approaches in my classroom, my own level of proficiency in te reo Māori (myself a second language speaker), and my students' almost total reliance on me as the teacher to direct their learning.

I believed my students were stranded at level two of the Threshold theory (see 1.5.1). They had age appropriate competency in the English language, according to standardised English literacy assessment scores and my observations of their conversational ability in English, but they were less proficient in the Māori language, according to the limited standardised Māori literacy assessments available and my observations of their te reo Māori conversational ability. They could not actively engage in

conversations in te reo Māori beyond basic everyday conversations. Their academic conversations were limited to their English transition programme.

According to the Threshold theory my students could be considered to be academically disadvantaged because they were being instructed in their second, less proficient language and therefore their study of some aspects of the curriculum was more limited than it would be if they were learning in English. According to the Threshold theory there is no negative effect on children's cognitive development at this level if they are learning in their stronger language. This was not the case for my students.

Researchers have posited from their studies on bilingual education that it takes five to eight years to acquire academic proficiency in one's second language (Cummins, 2000; Hakuta, Butler and Witt, 2000). Given that most of my students had been in Māori medium education for six to eight years it was a realistic expectation that my students could be expected to be more proficient in their use of academic Māori language. My students needed to be supported to reach the third level of the Threshold theory. This challenge formed the genesis of the current study.

2.7 Research Aim

As part of my ongoing professional development I had been learning about formative assessment (or assessment for learning, as it is sometimes known) and its positive effects on students' academic achievement (Black & William, 1998a & 1998b; Deakin-Crick, Sebba, Harlen, Guoxing & Lawson H, 2005). I had also previously studied bilingual education and second language acquisition at Waikato University and Kia Ata Mai Education Trust conjointly. When considering in particular the self and peer assessment component of formative assessment I recognised that if students were to use the language and thinking skills required for effective self and peer assessment in their literacy programme then they would be

experiencing the conditions advocated for effective second language acquisition outlined in the research on bilingual education. They would be communicating and self-managing at the advanced levels that I believed they were capable of and that the research deemed crucial to gain the cognitive benefits of bilingualism. But most importantly in the context of Māori cultural experience, this deeper level of communication skills would also allow my students to communicate more effectively with proficient speakers of te reo Māori, which is an urgent priority outcome for Māori medium schooling given the steadily depleting pool of native speakers of the Māori language. Thus arose my research aim, “Raising Māori medium students’ academic language proficiency through self and peer assessment.”

The following section briefly outlines the characteristics of formative assessment with a particular focus on the self and peer assessment component for raising student achievement. The next section describes the principles of second language acquisition outlined in the research to promote bilingual development. My theory of how the elements of self and peer assessment could be applied to support each of the principles is outlined after each principle respectively.

2.8 Formative Assessment

The effectiveness of formative assessment for raising student achievement was famously highlighted in Black and Wiliam’s (1998b) world-renowned review of the literature about formative assessment. The review synthesised over 250 studies that linked assessment and learning. It found convincing evidence of the significantly positive effect of formative assessment practices on students’ test scores and their skills as lifelong learners. According to Black and Wiliam (2009) practice in a classroom is formative:

to the extent that the evidence about student achievement is elicited, interpreted and used by teachers, learners or their peers to

make decisions about the next steps in instruction that are likely to be better, or better founded, than the decisions they would have taken in the absence of the evidence that was elicited. (p.9)

The Assessment Reform Group from the University of London provided a useful summary of the key findings from Black and Wiliam's work (Deakin-Crick et al, 2005). The summary lists the key components of formative assessment as including effective feedback to students, students being actively involved in their own learning, adjusting teaching from the results of assessment, recognition of the significant influence of assessment on the motivation and self esteem of pupils, and the need for students to assess themselves and understand what they need to do to improve.

To provide a practical reference for the application of formative assessment in the classroom, Clark (2005) further refined its elements to four fundamental components, all of which need to be incorporated into a programme of learning that is underpinned by the belief that raising children's self esteem is an important requisite for improving their achievement. The four elements include sharing learning goals or intentions, effective questioning, self and peer evaluation, and effective feedback (Clark, 2005).

2.8.1 Formative Assessment in the New Zealand Context

Formally embedding formative assessment practices into New Zealand schools through the provision of effective professional development was the aim of the Ministry of Education-led Assess To Learn (AtoL) project which began in 2002. Evaluation of the project has been ongoing since 2003 by national evaluators Dr Jenny Poskitt of Massey University and Kerry Taylor, Education Group Limited (Poskitt & Taylor, 2008). The evaluations since 2005 have shown that as a result of the AtoL project *"there have been impressive gains in student learning and achievement, and teachers and schools report positive sustainable changes in teaching,*

learning and assessment processes, practices and systems” (Poskitt & Taylor, 2008, p.3).

Further findings were that students whose teachers focussed their professional learning on reading and writing, made greater achievement gains than what is predicted in the national expectations via the Assessment Tools for Teaching and Learning (asTTle V4). These achievement gains were at least twice those experienced in similar professional development interventions (Poskitt & Taylor, 2008).

However, although the results of the AtoL project have provided valid evidence to inform the development of mainstream best practice in New Zealand schools to raise student achievement, the project did not involve Māori medium schools or classrooms. The current study is important in that it aimed to apply formative assessment practices, with a particular emphasis on self and peer assessment, in a Māori medium classroom to measure its effectiveness for raising students’ te reo Māori academic oral language proficiency.

Prior to this study I had been focussing my own professional development on formative assessment to improve the literacy skills of my Māori medium students. I had also previously studied bilingual education and Māori medium literacy practices, and I quickly identified that while ideally all of the components of formative assessment interconnect to raise student achievement, the component of self and peer assessment in particular could provide a cohesive and seamless framework within which the principles of instructed second language acquisition advocated in the research to increase second language proficiency (see 2.8) could be applied in my Māori medium classroom.

2.9 Self Assessment

Self-assessment is a process by which students engage in a review of their progress and achievement and decide the next steps for their learning. It may involve comparison with exemplars, success criteria or other criteria. In self-assessment students have to understand the criteria or standards that will be used to assess their learning, make judgements about their work in relation to the criteria, and use feedback from the teacher to work out their next learning steps (Black and William, 1998a, 1998b; Boud, 1994, 2000; Deakin-Crick et al, 2005; Joyce, Spiller & Twist, 2009).

Several studies in Black and William's (1998a, & 1998b) review reported gains in achievement for students who had been involved in self-assessment. Sawyer, Graham and Harris' study (1992, cited in Black and William, 1998a) for example found that students with learning difficulties who received feedback through self-monitoring (or self assessment) made better achievement progress than those who did not receive such feedback. McCurdy and Shapiro (1992, cited in Black and William, 1998a) found that students who participated in self-assessment performed better than students who received feedback only from the teacher without self-monitoring. In addition to positive curriculum gains self and peer assessment develops students' abilities to learn how to learn, their motivation to continue learning and their ownership of and responsibility for learning (Black and William, 1998a, 1998b; Boud, 1994, 2000; Deakin-Crick et al, 2005; Joyce, Spiller & Twist, 2009).

In 2006 the Ministry of Education in New Zealand began a review of the 1999 National Assessment Strategy. Phase two of that review involved the development of a new strategy and the Ministry commissioned a paper to provide advice on future directions. The paper (Absolum, Flockton, Hattie, Hipkins, & Reid, 2009) advocated the continued focus on assessment for learning (or formative assessment) and highlighted as a priority need " *that*

all young people should be educated in ways that develop their capacity to assess their own learning” (p.5).

Against this backdrop of best practice research available to inform teaching and learning in mainstream schools, and explicit national expectations for student learning and achievement (Ministry Education, 2010a) there is a significant dearth of research to inform Māori medium educational best practice. As noted above, as recently as 2010 the Ministry of Education has acknowledged that there remains a need for quality assessment resources in Māori medium settings (Ministry of Education, 2010c). The current study is significant in this regard as it aimed to trial the application of self-assessment practices and tools developed specifically for a Māori medium setting to raise students' academic language proficiency and self managing skills. There are indications that this is among the first recorded empirical studies of this nature in a Māori medium context.

2.10 Principles of Instructed Second Language Acquisition

In 2005 Professor Rod Ellis from the Department of Applied Language Studies and Linguistics at the University of Auckland conducted a review of the literature on second language acquisition to report to the Ministry of Education (Ellis, 2005). While acknowledging the lack of consensus amongst researchers on the most effective methods to facilitate second language learning, Ellis poses 10 general principles for teachers to consider when developing their practice of teaching in second language contexts. Because there is no single theory of second language acquisition, researchers suggest that rather than view these types of principles as prescriptive, teachers should use them to develop a theory and from there a position on pedagogy. They suggest the best use of such principles is to view them as provisional specifications, ideas and possibilities that can be tried out by teachers in their own classrooms in

ways suited to their particular contexts (Krashen, 1988; Steinhouse, 1975; Ellis, 2005).

When considering the principles of second language acquisition the practice of self and peer assessment resonated with me as a framework that was able to bring them all together cohesively in the classroom to improve my students' second language proficiency. This theory gave genesis to the current research study.

The remainder of this chapter outlines each of Ellis' 10 principles and my theory of how each one respectively could be promoted in a programme of self and peer assessment in my Māori medium classroom.

2.10.1 Principle 1: Formulaic and Rule Based Competence

Formulaic expressions are rote-learnt phrases, statements or questions. Examples are provided in the Table 1 below.

Table 1

Examples of formulaic expressions

Can I have...?	Who is that...?
What's your name?	Have you got...?
No, thank you.	Where's my book?
How are you?	Very well, thank you?

These common expressions are usually learnt naturally without the need to explicitly focus on underlying grammatical rules. They may provide the basis for the later development of rule based competence. For example, "What's your name?" may become, "What's his/her name?" or, "What are their names?" and so on.

2.10.1.1 Formulaic Competence and Self and Peer Assessment

To guide the students' self and peer assessment in my classroom I theorised that I would need to develop a matrix of achievement criteria in te reo Māori (Te Anga Putanga Ako) for students to refer to and discuss when assessing their own and others' writing skills (appendix C). This matrix would need to include increasingly complex language structures that would extend students' current conversational competency to more academic language registers, equivalent to that which they would be expected to know in order to engage with Te Marautanga o Aotearoa - the national curriculum for Māori medium classrooms (Ministry of Education, 2010a) at a level appropriate for their age.

I theorised that the structures in Te Anga Putanga Ako would become more familiar and automatised the more the students used them. Potentially this would create an even larger pool of formulaic expressions for the students to manipulate and apply in different contexts as they became more confident and metalinguistically aware.

2.10.2 Principle 2: Focus on Meaning

Language is learnt most naturally when we focus on what we want to say as opposed to how we need to say it, that is, when we focus on meaning rather than form. Indeed many researchers have concluded that language acquisition takes place only when students are decoding and encoding in contexts of real and purposeful communication (Ellis, 2005; Glynn, 1985; Glynn, Wearmouth & Berryman, 2005). Ellis (2005) notes that *“when learners focus on meaning, they develop both the skills needed for fluent communication and the vocabulary and grammar needed to use the language effectively”* (p.2).

Research has advocated task-based approaches for providing meaningful communicative exchanges in classrooms (Ellis, 2005; Gibbons, 2002). In a task-based approach to language teaching the teacher sets up tasks where students must communicate for meaningful purposes rather than focus on the language forms themselves.

2.10.2.2 Focus on Meaning and Self and Peer Assessment

In this study the students would be set the purposeful task of sharing their ideas with the world on a new classroom blog. The blog would allow the students to access a geographically widespread Māori speaking audience who could provide feedback. This was particularly important given the limited number of Māori language speakers in the community that the students lived in. The students were keen to engage with communication technologies and so I theorised that they would be motivated to develop their writing to the high standard required before it could be published on the blog. Students would need to understand and use the language in the new matrices in order to assess their writing and identify next steps for improvement. Learning objectives for lessons would then be developed in collaboration with students, according to their self identified needs.

2.10.3 Principle 3: Focus on Form

Schmidt (2001) refers to focus on form as the correlation made between grammatical forms and their meanings in any particular communication context in which they arise. Ellis (2005, 2008) notes that focus on form can also be assumed to refer to an awareness of underlying abstract rules in any particular language. Schmitt (2001), however, maintains that attending to forms involves noticing specific linguistic items as they arise and not to a focus on underlying grammatical rules.

Grammar instruction may involve intensive grammar lessons to focus on specific forms, perhaps progressing through a structured syllabus. Grammar teaching and learning may also be more incidental through corrective feedback known as recasts (Ellis, 2005) where the more proficient speaker recasts the students inaccurate sentence or phrase back to them using the corrected model during communicative tasks. To be effective recasts have to be explicit enough for students to notice what is being corrected. This type of focus on form is more implicit and brief and

has been shown in some studies to be more effective in improving students' grammatical accuracy than focusing on correct models before they speak (Long, Inagaki, & Ortega, 1998). This feedback can be offered in task-based lessons such as those described above. It is generally accepted that there are pros and cons for both types of approaches (Ellis, 2005).

2.10.3.1 Focus on Form and Self and Peer Assessment

Prior to the study I posited that through students' assessment of their own and others' writing, using the criteria from the writing matrix, the students would identify their own next steps for improving their writing. These steps were likely to include improvements in their grammatical structures. Lessons would be provided to explicitly teach grammar as these needs arose. Corrective recasting would also be provided during the students' communicative tasks to correct grammatical errors as the need arose and written corrective feedback would be given in students' writing (Clark, 2005).

To further support students' language skills I identified the need to create new reading tools - Ngā Kāri Matapaki (appendix D) that could support students to notice, discuss and analyse new forms of language in written texts, including grammar, that could be applied to improve their own writing skills. This idea developed from my previous use of reading circle tools developed by Sheena Cameron (Sheena Cameron, n.d.) for mainstream classrooms.

Developing the students' metalinguistic skills in this manner was an important aim of the programme because of the limited models of spoken language available to them. Although there are few opportunities for the students to hear the Māori language spoken in their communities they do have access to an extensive pool of written material that contains rich models of meaningful language in the form of traditional and contemporary Māori stories, reports, genealogies, narratives, explanations and recounts, as well as tuhi whakangāhau (stories for entertainment). Analysing these

forms of writing, using newly developed reading circle tools would provide an opportunity for the students and the teacher to learn together. In this way students' language development would not be limited to the language forms known to the teacher, myself a second language learner. It was my hope that these metalinguistic skills would equip my students for lifelong language learning beyond the classroom.

2.10.4 Principle 4: Implicit and Explicit Knowledge

Fluent communicators in any language have acquired a bank of implicit knowledge. That is language knowledge that they are unconscious of but that enables them to communicate effectively. For example when speaking English one might always put the subject before the verb without explicitly knowing that this is the rule. Implicit knowledge is knowledge that has been assimilated through immersion and practice. Explicit knowledge on the other hand is conscious knowledge of how the language works. This type of knowledge can be accessed when one meets challenging communicative situations. For example one might consciously think about the grammatical rules to string a particular second language sentence together. Five year old children on the other hand are not likely to be analysing explicit knowledge of language rules when excitedly telling a parent about their day at school, instead they are relying on implicit or unconscious knowledge. Ellis (2005) argues that it is implicit knowledge that underlies one's ability to communicate fluently and with confidence in a second language and therefore needs to be the aim of any instructional programme. There are however conflicting theories on how best to promote implicit knowledge. DeKeyser (1998), asserts that implicit knowledge develops when explicit knowledge is automatised through practice. Krashen (1988) believes that implicit knowledge develops naturally in meaning focussed communication, supported perhaps by some focus on form. Regardless of these differing viewpoints researchers agree that implicit knowledge is best developed in communicative situations such as the task based activities already outlined.

There is controversy about the value of explicit knowledge for developing language proficiency (Ellis, 2005). Ellis (2005) asserts that explicit knowledge is only of value if it can be shown that learners can access this knowledge in actual communication. Yuan and Ellis (2003) found that learners' grammar was improved when they had time to plan their narrative tasks, which may mean that they were accessing their explicit knowledge to prepare.

2.10.4.1 Implicit Knowledge and Self and Peer Assessment

In my own experience my Māori medium students were able to communicate their ideas significantly more proficiently when writing them as opposed to speaking. I also believed that this was due to the time they were able to spend accessing and manipulating their explicit knowledge. The challenge was to provide opportunities for students to practise this knowledge so that it became automatised and easily accessible in impromptu oral communications. In this study students' implicit knowledge would be developed through regular use of the new forms in Te Anga Putanga Ako and regular analysis of written material using the new reading tools (Ngā Kāri Matapaki). Explicit knowledge of grammatical rules would be taught as the need arose. It was my belief that the time constraints of this study would not allow for the measurement of any automatised new explicit knowledge such that it would be accessed as implicit knowledge, although any generalisation to other contexts or automatised would be noted.

2.10.5 Principle 5: The Learners' Built-in Syllabus

Research into second language acquisition has found that learners master various grammatical structures in a relatively fixed order and sequence (Corder, 1967; Ellis, 2005). Corder (1967) suggested that naturalistic learners have their own 'built in syllabus' for learning grammar as implicit knowledge. Krashen (1988) further postulated that with adequate and comprehensible input learners would automatically proceed along their in-built syllabus so long as they were sufficiently motivated, and that there

was no need for grammatical instruction. He posited that grammar could only contribute to explicit knowledge.

Research that has compared instructed second language learners with naturalistic learners has found that the order of acquisition of specific grammatical features was largely the same although instructed learners often gained higher levels of grammatical competence (Ellis, 2005). There was no guarantee that grammatical instruction resulted in students' learning. There is agreement however that it can be beneficial to teach grammar, but only if it is taught in line with the learners' 'built in syllabus' or natural order of acquisition. This is an important point in the Māori medium context as to date there have been no empirical studies on the existence of a natural order of acquisition of te reo Māori, or the validity of the research in the New Zealand Māori medium context.

2.10.5.1 The Learners' Built in Syllabus and Self and Peer Assessment

Through self-assessment in this study, students would be able to decide their own language learning next steps. The lessons the teacher planned and taught would develop from the next steps students identified for themselves, which may be according to their individual built-in syllabus, if it exists. The meaningful, language rich, task-based approach to the programme would facilitate naturalistic acquisition of new structures. There would be individualised grammar instruction via feedback, also allowing students to acquire new knowledge according to any built in syllabus they might have.

2.10.6 Principle 6: Second Language Input

It is an obvious reality that learners must receive exposure to the target language in order to acquire it (Ellis, 2005; Gibbons, 2002; Shehadeh, 1999). As has been previously discussed the limited opportunities to hear

the Māori language in their homes or mainstream society meant that for my students classroom opportunities for input were crucial.

2.10.6.1 Second Language Input and Self and Peer Assessment

Prior to the current study I identified that the practice of self and peer assessment in the literacy programme, supported by Te Putanga Ako, would encourage and support peer input between students. The use of Ngā Kāri Matapaki in the reading programme would provide input to scaffold and extend students' existing language with more elaborate models. Students' use of Te Anga Putanga Ako and Ngā Kāri Matapaki, and their analysis of written models of language in reading texts would ensure that their language learning was not limited to the structures known to the teacher, myself a second language learner. It was also a secondary aim of the study that by learning the skills needed to analyse written language students would learn the metalinguistic skills that would develop them as lifelong learners of language, so that when they heard new language structures for the first time they would have strategies and explicit knowledge to decode them. This was important in a diglossic context where students are likely to come across language structures and vocabulary for the first time in any engagement with more proficient speakers or written material.

2.10.7 Principle 7: Opportunities for Second Language Output

Output, or actually speaking a language as opposed to simply listening to it, is a well-recognised requisite for second language development (Gibbons, 2002; Ellis, 2005; Perrot, 1998; Shehadeh, 1999). Output develops second language proficiency in a numbers of ways. For example, in order to produce comprehensible utterances speakers must first formulate a hypothesis about the appropriate grammatical structure to use. Speaking allows learners to test out their hypotheses and receive feedback when they make errors or indeed reinforcement of correct structures. Speaking also allows learners to automatise the structures they

have learnt. By speaking, learners can steer conversations to topics of their own interest, thus allowing them to develop their personal voice. And finally, Ellis (2005) has added that when speaking, learners can hear and assess or analyse the input provided by their own speech.

2.10.7.1 Second Language Output and Self and Peer Assessment

In this study it was theorised that student assessment of their own and other's written material to improve their writing for the blog would provide the conditions that Shehadeh (1999) suggests are crucial to encourage both language input and output.

In terms of classroom practice, this means that educators should introduce such activities as problem solving, decision making, opinion exchange, picture dictation, and jigsaw tasks. These activities provide an ideal atmosphere for negotiating meaning in appropriate contexts. Learners have opportunities to receive input that they have made comprehensible through negotiation and at the same time to produce comprehensible output, an output that learners have made comprehensible to other learners through negotiation. (Shehadeh, 1999, p.3)

In this study students would be taught and encouraged to assess their own and each other's writing. This practice would provide opportunities for output where students would have to exchange opinions, problem solve when they did not agree, and negotiate to make decisions about next learning steps. Peer assessment tasks would provide more opportunities for communicative interactions than are possible with a teacher-student-teacher discourse pattern known as an Initiate Respond Feedback (IRF) pattern where the teacher initiates communication- the student responds – the teacher feeds back (Gibbons, 2002). Many researchers agree that when language acquisition is a major objective of the teaching programme, as in Māori medium classrooms, teachers must employ alternatives to the IRF discourse patterns, such as peer and group

communicative tasks (Gibbons, 2002; Howe, 1992; Perrot, 1998; Shehadeh, 1999).

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)

2.10.8 Principle 8: Interacting in the Second Language

The principle of interaction in the second language posits that second language acquisition is more than just automatising existing language resources. It is also concerned with the acquisition of new knowledge and meaningful communicative interactions are needed to support these conditions (Ellis, 2005; Johnson, 1995; Long, 1996). According to Long's (1996) Interaction hypothesis interaction supports acquisition when a communication problem arises and learners engage in negotiation for meaning, such as the self and peer assessment tasks outlined.

Johnson (1995) identifies four requirements for an acquisition conducive classroom including that there will be contexts where children have a reason to engage in the target language; there will be opportunities for students to express the meanings personal to them; students will be scaffolded to participate in language related activities beyond their current ability; and there will be a full range of contexts to provide a range of opportunities for communication forms. Ellis (2005) adds that giving control of the discourse topic to the students is preferable. However, he notes that this is often unworkable as teachers need to ensure that classroom discourse is orderly and when students are in total control of topics they often revert to their first language, a phenomenon I have long observed in my Māori medium classrooms. Ellis (2008) and Gibbons

(2002) suggest that an effective solution to this quandary is to incorporate small group work into lessons.

2.10.8.1 Interacting in the Second Language and Self and Peer Assessment

In this study the publishing for the blog and related self and peer assessment tasks would provide meaningful purposes for interaction in the target language, te reo Māori. The matrices and reading circle tools would scaffold students to use extended forms of the target language independently. The teacher would gradually withdraw support as students became more competent with the use of the matrices and reading circle tools, thus encouraging student–student interactions and mitigating the need for them to revert to English. Students would have control of the topic in so far as they would choose which aspects of their or others' writing to assess and focus on for improvement. They would also decide their own next learning steps, providing intrinsic motivation to learn the new self-identified skills.

2.10.9 Principle 9: Individual Differences in Learners

In essence this principle of consideration of individual differences in learners involves taking into account students' individual aptitude for learning and ensuring they are motivated. Teachers need to be clear when instructing, explaining things simply and adjusting the pace of instruction to the needs of the student (Ellis, 2005).

The positive effect of self and peer assessment on student motivation and its major focus on individualising learning has been well documented (Black and Wiliam, 1998a, 1998b; Boud, 1994, 2000; Deakin-Crick et al, 2005; Joyce, Spiller & Twist, 2009).

2.10.9.1 Individual Differences in Learners and Self and Peer Assessment

Developing self and peer assessment as a framework for my students' literacy programme would allow the individualisation of the students' language learning programme because they would be supported to use Te Anga Putanga Ako to select outcomes for discussion related to their own writing. They would choose outcomes for further development that they identified as their own next learning steps. To support students' learning, teaching lessons could then be targeted to meet individual self identified needs and individual needs that the teacher identified.

2.10.10 Principle 10: Free and Controlled Production

Norris and Ortega's (2000) study of form focussed second language instruction found that the effectiveness of second language instruction is contingent upon the way it is measured. In their study instructional effectiveness was measured as higher when students were assessed for controlled production using multi-choice and constrained constructed response items than it was when students were assessed for free constructed responses like responses elicited in communicative tasks. However, it is clear that the latter is the item which most resembles the language that is found in natural settings and therefore increasing students' free constructed language proficiency was the ultimate goal of this study.

2.10.10.1 Free and Controlled Production and Self and Peer Assessment

In this study encouraging and measuring students' free and controlled production of te reo Māori would be a big challenge given that for most students the classroom was the only site of engagement in the target language. Accordingly, students' language development would need to be

measured by comparing their free constructed answers to semi structured interview questions about their learning prior, during and after the intervention, for comparison. Conversations between students would also be recorded during the intervention to show any development.

2.11 Summary

Prior to this study I theorised that the learning conditions required for and produced by effective self and peer assessment practices were conducive to the principles of second language acquisition that have been identified in research on bilingual education. Applied in the context of literacy learning in a Māori medium classroom I theorised that self and peer assessment supported by newly developed language scaffolds would provide the framework to raise students' academic language proficiency by providing purposeful opportunities for them to engage with more proficient models of te reo Māori, motivation for them to extend their practice and knowledge of new language forms, and a programme of individualised teaching and feedback.

The following chapter outlines the methodology and data collection methods that were employed to conduct this research study.

Chapter 3: Methodology

3.1 Kaupapa Māori Research

Historically, discriminatory practices inherent in many research projects involving Māori have at best, not advanced Māori wellbeing and at worst compounded our subjugation in New Zealand society. These negative research outcomes have prompted Māori scholars to define methodological principles which ensure that Māori benefit from the research studies in which they themselves are the subjects (Bevan-Brown, 1998; Bishop, 1996; Bishop and Glynn, 1999; Mutu, 1998; Smith, 1990; Smith, 1999).

Bishop and Glynn (1999) advise that in respect of research *“there is a need for a theoretical framework to address Māori cultural aspirations for power and control over the issues of initiation, benefits, representation, legitimation and accountability”* (Bishop and Glynn 1999, p.106).

To address these challenges kaupapa Māori research frameworks have been advocated. Kaupapa Māori research has been defined as research *“by Māori, for Māori and with Māori”* (Irwin, 1994; Mead, 1996). The issue of the researcher needing to be Māori has however been widely debated (Smith, 1999, 2005; Bevan-Brown, 1998; Bishop, 2005, Hill, 2010).

This research study was conducted as an action research project. It collected both quantitative and qualitative data in four phases within a kaupapa Māori methodological framework. Accordingly it employed a design that aimed to advance Māori wellbeing and aspirations, and included the research requisites of by, for, and with Māori outlined above. The researcher was Māori, the research was initiated and designed to improve educational outcomes for Māori, and the research was designed collaboratively with the Māori participants and their whānau.

As an early proponent of culturally valid research methodologies, Graham Smith (1990) advocated that the following four questions be answered positively in order for research into Māori issues to be considered valid and worthwhile:

1. What difference is this research going to make for Māori?
2. What meaningful interventions are going to result?
3. How does the research support our cultural and language aspirations?
4. Is the research merely telling us what we already know?

This study met those requirements as it aimed to test teaching methods and tools that could potentially improve Māori medium students' Māori language acquisition to support the aims of the Māori medium education movement. The study tested second language pedagogies that had not been formally applied to Māori medium contexts in the past and would therefore potentially inform the development of Māori medium pedagogies in the future.

3.2 Background - Teaching As Inquiry

The research study had its genesis when I was teaching in a Māori medium level 1 immersion classroom in Southland, New Zealand. As a reflective educational practitioner my teaching practice followed the process of teaching as inquiry advocated in the New Zealand education system as teaching best practice (Ministry of Education, 2007).

Teaching as inquiry describes the cyclic process of focusing inquiry, teaching inquiry and learning inquiry. Focusing inquiry is determining and prioritising what it is students need to learn according to the curriculum, community expectations and student interests, needs and experiences. The teaching inquiry phase focuses on identifying strategies that are most likely to achieve the determined outcomes. In the learning inquiry phase

the impact of the interventions on student learning is evaluated and so the cyclic process continues.

As part of the teaching as inquiry process in my classroom I had identified the need for students to improve their te reo Māori oral proficiency. I theorised that the practice of student self and peer assessment would promote these students' academic language acquisition (see chapter 2). At a time when there was a need for more robust research into effective Māori medium pedagogies it was important to formalise my teaching as inquiry processes into an empirical study. Formalising the study into a supervised research thesis would bring credibility to the outcomes and make them available to interested Māori medium educationalists looking for ways to develop their teaching practice and student outcomes.

3.3 Action Research

As a logical reflection of the teaching as inquiry process this study employed an action research design. Action research has an applied focus which aims to improve situations for individuals or groups. Like teaching as inquiry, action research involves cycles of planning, acting, observing, reflecting and then re-planning. Action research is a systematic learning process that involves people theorising about their practice, acting deliberately and gathering compelling evidence (Cohen, Manion, & Morrison, 2002).

Mills (2003) defines action research as:

Any systematic inquiry conducted by teacher researchers, principals, school counsellors, or other stakeholders in the teaching/learning environment to gather information about how their particular schools operate, how they teach, and how well their students learn... with the goals of gaining insight, developing practice, effecting positive changes in the school environment (and

on educational practices in general) and improving student outcomes and the lives of those involved. (p.5)

This particular study included the characteristics that are amongst those listed by Hult and Lenning (1980) and McKernan (1991) as characteristics of action research. In particular, the aim of the study was to enhance the competencies of participants; feedback from data would be used in an ongoing cyclical process for intervention development; there was a focus on problems that are an immediate concern to practitioners; there was a formative approach where the definition of the problem and the aims and the methodology altered during the process of the research; there was ongoing evaluation and reflection; and the research would be available for use by practitioners.

3.4 Research Phases

The research was conducted in three phases (appendix A). Phase one involved gaining whānau consensus of the aims and methods of the research, whānau and participant consents, and initial data gathering. Phase one also comprised the development of literacy intervention tools for use by the student participants. Phase two involved the introduction of the practice of self and peer assessment to student participants, supported by the newly developed literacy intervention tools. As students' needs developed and differentiated throughout phase two the original literacy tools were developed further to meet those needs, and a new set of tools was also created. In phase three, post study data was collected and analysed.

3.5 Setting

The study was conducted in a decile 3, mainstream contributing primary school in Southland, New Zealand. The school had approximately 300 students ranging from years 0 to 6. There were 14 English medium

classrooms in the school and two Māori medium level 1 immersion classrooms.

Collectively the two Māori medium classrooms were known by a name given to the Māori medium context in the school by a kaumātua in 2008. The name represents the many tribal regions that the students come from and their coming together in the school as one. The immersion unit was made up of one junior immersion classroom with students from years 0 to 3, and one senior immersion classroom with students from years 4 to 6. At the time of this study each of the classrooms had 23 students. It was within the senior Māori medium classroom that the current research was conducted.

There were three teachers within the Māori medium setting. Each classroom had a Māori medium teacher, one of whom was the researcher and both of whom were second language speakers of te reo Māori. The third, a part time teacher, was the English literacy teacher in the senior class. The English literacy teacher was also Māori but did not speak Māori. She taught English in the senior class for two full days a week while the regular teacher (the researcher) was released for senior management duties.

Māori medium educationalist Cath Rau (C. Rau, personal communication, 2009) has recommended from her research and experience that students transition to English literacy when they reach the reading level of Pingao, which denotes early fluency. Therefore students in the senior immersion class learned their entire curriculum through te reo Māori until they were introduced to an English literacy programme from the time they reached the reading level of Pingao. Historically this was usually in term two or three of their first year in the senior class.

In the senior classroom literacy was taught in te reo Māori for three days a week. The English transition programme consisted of four to six hours of English literacy a week over the two remaining days of the week. This

balance of formal Māori and English continued until the end of year 6. The English literacy and senior Māori medium teachers often collaborated to design and teach similar outcomes in their respective literacy programmes in the senior class at the same time, according to student need, thus allowing for the transfer of skills across languages (Hill, 2010). As the Māori and English literacy programmes were taught on separate days by separate teachers the students' languages of instruction were, in the main, separated by time, subject and teacher as recommended in the research on bilingual education (May et al, 2004). However translanguage strategies (see 2.4.1.2.1) were sometimes used by the Māori medium teacher to explain new concepts or vocabulary to students to support their understanding before they engaged with them in te reo Māori for the first time.

3.6 Participants

There were eight participants in this study. All participants were students in the senior immersion class. Six participants comprised the entire year 6 group in their final year at primary school. The remaining two participants were high achievers from the year 5 group, which totaled six in all.

Given the diglossic nature of te reo Māori in New Zealand society opportunities for students to hear and produce te reo Māori were limited. In this study the student participants were living in Southland, New Zealand, where only 11.8% of the total population identified as being Māori in the 2006 census. Of that 11.8% only 16.4% reported that they could hold a conversation about everyday things in te reo Māori (Statistics New Zealand, 2011). Therefore most students came from homes where only English was spoken. This community was particularly devoid of Māori language speakers who could provide language input, and expectations and opportunities for output. Students' Māori language input came mainly from the teacher in their bilingual class at the school they attended. As such I was the major source of their Māori language input - myself a

second language speaker with limited proficiency in academic registers of te reo Māori.

The year 6 participants were chosen because I believed that these students were capable of a higher level of Māori language proficiency than they currently produced, and this was their last opportunity for some accelerated development of te reo Māori before moving on to secondary schooling the following year. Five of the year 6 students were achieving in Māori literacy at or close to what was expected for their age in Te Marautanga o Aotearoa (Ministry of Education, 2010a) according to Māori medium reading assessments (Rau, 1998), asTTle writing assessments and Ngā Whanaketanga Reo (Ministry of Education, 2010b). One of the year 6 students was underachieving and had progressed very slowly for the entire 6 years of schooling. The two year 5 participants were chosen because they were achieving above their expected level in pānui and tuhituhi, according to the same reading and asTTle assessments, and I believed they were ready for extended academic communication in te reo Māori. Another deciding factor was that they were already grouped for literacy learning with 5 of the year 6 students.

All of the eight participants had attended Kohanga Reo for at least two years before entering primary school. Only one of them came from a home where Māori was spoken by family members. For all but one of the participants the classroom was the main, if not only, place where they heard or were expected to speak Māori at an age appropriate level.

3.7 Data Collection Methods

The study collected both qualitative and quantitative data. There were three methods of data collection. The methods were semi-structured interviews, classroom observations and asTTle tuhituhi (writing) assessments.

3.7.1 Interviews

Individual semi-structured interviews were conducted at the beginning of the study (week 1), midway through (week 10) and at the end (week 20) (appendix B). The interviews were conducted to ascertain students' te reo Māori proficiency and their ideas about their own learning. The interviews were conducted in Māori and English to enable the participants to articulate their ideas in as much depth as possible, which may not have occurred if they had been restricted to only their second language, te reo Māori. The researcher administered the initial and end point interviews. A local resource teacher of Māori (RTM) administered the midway interviews. The RTM involvement was planned as a means of providing an opportunity for the students to discuss any issues they might be having with the research with someone other than the researcher who was also their classroom teacher. The RTM was known to the students and had a positive relationship with them. All interviews were video recorded and transcribed.

Immediately after the individual, midway interviews the participants asked if they could be interviewed as a group as they thought this made them feel more relaxed, and so as well as individual interviews, group semi structured interviews were also conducted at the mid and end points of the study by the researcher. All interviews were video recorded and transcribed.

3.7.2 AsTTle Tuhituhi Assessments

Students tuhituhi (writing) development was measured using the asTTle tuhituhi tool (Murphy and Keegan, 2002). The asTTle tuhituhi tool was aligned to the 1993 curriculum for Māori medium programmes (Ministry of Education, 1993). Although it was not aligned to the current Māori medium curriculum it was the only standardised assessment tool available to measure Māori medium students' tuhituhi development.

AsTTle tuhituhi assessments were administered by the researcher pre intervention (week 1) and post intervention (week 20) to provide both quantitative and descriptive data on the development of participants written academic language proficiency in te reo Māori. Two local RTMs moderated all assessment scores independently of the researcher.

3.7.3 Lesson Observations

Group lessons and student-student self and peer assessment conversations were video recorded at the beginning, midway through, and at the end the study. The recordings were transcribed during the study to capture students' developing use of te reo Māori in the context of their learning.

3.8 Phase One

3.8.1 Whānau consensus

In week one of the study, which was week one of term two of the school year, I conducted a whānau hui to explain the research aims to the families of the participants and to ask their permission for the their children to participate, and to gain any ideas they had about the research aims or processes. All participants and their whānau agreed with the research proposal and signed consents. The whānau was assured that they would be given the opportunity to withdraw from the research at any time and to read the final draft of the research thesis and give their approval before it was submitted for examination. They would also be invited back to another hui where the results would be shared and any video recordings made available for their viewing. The whānau would also be asked at the end of the research for permission for the researcher to use the video recordings for future educational purposes.

3.8.2 Initial Data Gathering

In week 1 of the study I interviewed the students using the semi structured interview schedule. The interviews were conducted in te reo Māori initially. The same interview questions were then asked in English to ensure that participants' responses were not limited by their second language proficiency.

In that same week participants were given an asTTle tuhituhi assessment. The genre was tuhi paki (recount writing). These assessment scores were moderated by two local RTMs including the one who had conducted the mid point interviews in week 10.

The results from these assessments (see chapter 4) showed clearly that the students did not have sufficient te reo Māori language proficiency to discuss their literacy learning in any depth compared with what they were able to discuss in English. They were not able to critically reflect on their learning to any great degree or draw on their metacognitive skills to consider how their learning was progressing. Students were completely dependent on me as the teacher for their learning direction and support.

3.8.3 Intervention Tools Development

To support students' oral language and literacy learning development I developed a matrix of writing learning outcomes (Te Anga Putanga Ako). This was a complex task as the matrix needed to align with the school curriculum, itself aligned to Te Marautanga o Aotearoa (Ministry of Education, 2010a) and Ngā Whanaketanga Tuhituhi - writing expectations for Māori medium students by time in Māori medium (Ministry of Education, 2010b), and the asTTle assessment tool (Murphy and Keegan, 2002) as this was the only standardised writing assessment tool available to Māori medium. This was challenging because the asTTle assessment tool had not been aligned to either Te Marautanga o Aotearoa or Ngā Whanaketanga Reo. Because there was as yet no other nationally normed

assessment tool developed to measure student progress against Ngā Whanaketanga Reo, and the asTTle progress indicators were arguably sound logical progressions, I needed to develop a matrix of learning outcomes that incorporated both asTTle outcomes and the school curriculum, including Nga Whanaketanga Reo. This matrix needed to be in student speak so that students could identify and discuss their own achievement levels and next steps in line with the school and national curriculum. It seemed logical to create a matrix that incorporated all these indicators so that it would double as a valid tool in the development of overall teacher judgements for reporting student achievement against Ngā Whanaketanga to parents and the Board of Trustees, which became a ministry requirement in 2011.

After much consideration the first matrix draft was complete. It was called Te Anga Putanga Ako (1) (appendix C). The matrix was divided into sections that aligned with the sections of the asTTle assessment matrices, whaihua (audience awareness and purposes), kiko (content), hanganga (structure), mātauranga reo (language knowledge/resources). Ngā Whanaketanga Reo expectations were integrated into the levels and sections that I thought they best aligned with, based on my professional pedagogical and content knowledge.

3.9 Phase Two: Teaching and Learning Intervention

3.9.1 Introduction of Te Anga Putanga Ako

In week three of the study I introduced Te Anga Putanga Ako (1) to my participant group of students. The students had written a recount about their holidays for their asTTle assessment. I explained that students were going to begin learning to assess their own writing so that they could decide what they needed to learn next to make their writing better. I introduced Te Anga Putanga Ako (1) and explained each of the outcomes in Māori. There was a lot of information and when I questioned students to check their understanding they were clearly lost due to the large amount of

unfamiliar language. I then translated and explained each outcome orally in English to aid understanding. This practice is known in the research on bilingualism as translanguaging (see 2.4.1.1.1).

Next we selected one student volunteer's written recount and discussed what features from the Te Anga Putanga Ako were evident in the sample. Most of the language was new to the students and we had to discuss one section at a time, often with me as the teacher clarifying in English.

During the next three weeks our writing lessons took the form of students analysing their and other's writing against Te Anga Putanga Ako. Although the students quickly grew confident to discuss the new outcomes and their relevance to writing samples they initially used incorrect Māori language structures when discussing them. I therefore often recast (see 2.10.3) their approximations to model the correct structures and had the students repeat the correct structure after me.

The use of Te Anga Putanga Ako had an immediate impact. After the first week of using it (week 4 of the study) one student asked if they could have a copy of it to keep on their desk so that they could look at it while they were writing to determine what they needed to do to "piki ake ki te taumata toru" (go up to level three).

To ensure the students were motivated to continue writing we now needed a new, meaningful and engaging purpose for our writing. I theorised that an internet blog would be the best way to provide the students with a Māori language speaking audience for their writing, given that there were a number of Māori medium classrooms around the country who could access and respond to the blog. Students were already familiar with various social networking sites and technologies on the internet and were always eager to engage with them. Together the class and I created a class blog on the Edublogs site. The students were very excited and engaged.

Our first writing task for the blog was to introduce ourselves to the world by writing about ourselves and our whānau. Students were highly motivated to use Te Anga Putanga Ako (1) to improve their writing for the blog. Surface features began to develop immediately. Although I had tried to teach paragraphing in the past there had been very slow development. With the introduction of Te Anga Putanga Ako (1) the students began developing their writing into paragraphs for the first time, almost overnight! Te Anga Putanga Ako (1) outcomes such as the use of kupu āhua (describing words), and timata rerenga hou (new sentence beginnings) were also amongst students' favourite foci for improvement.

3.9.2 Anga Putanga Ako Revised

By week 6 I noted that although the students were motivated to engage with Te Anga Putanga Ako (1) and were discussing some of the outcomes confidently, the matrix was complicated with too many outcomes and I could not explain simply enough in te reo Māori the distinction between the four sections. Te Anga Putanga Ako (1) needed to be rewritten. It made better sense to develop the matrix into three sections which aligned with the Te Marautanga o Aotearoa writing strands - puna reo (conventions of print), āheinga reo (purposes for writing) and rautaki reo (writing strategies) - and which incorporated Ngā Whanaketanga Tuhituhi - Māori medium writing expectations for time in Māori medium (Ministry of Education, 2010b). I believed such a matrix would be simpler for students to understand and use because the function of strands were easier to distinguish and explain. In addition, a matrix aligned with Ngā Whanaketanga Tuhituhi would be a more straightforward tool for use in forming overall teacher judgements for reporting student achievement against curriculum levels. Any asTTle outcomes would need to be fitted into the curriculum sections as opposed to the vice versa first draft matrix, Te Anga Putanga Ako (1). Te Anga Putanga Ako (2) was developed by the end of week 6 (appendix D).

Te Anga Putanga Ako (2) was introduced in week seven of the study. Although the outcomes were very similar to the first version the differentiation between the new sections was simpler to explain to the students, and they were able to retell that differentiation more easily. The students continued to assess their own and others' writing, in pairs and as a whole group, using the new matrix.

By week 8 eight I needed to encourage students to discuss sections of the Te Anga Putanga Ako (2) that were less familiar as they were tending to always discuss the sections that they were most familiar with rather than take risks discussing less familiar sections. In some lessons I now directed which sections we would be focussing on and assessing the writing against. Initially, with the introduction of a new section the process was again that I would have the students assess a piece of writing as a group. They would discuss the outcomes from the targeted section of the matrix and when the sentence structure they used was incorrect I would recast the sentence structure and the student would repeat it after me. This would usually happen two or three times as different members of the group discussed the outcomes and thereafter the students would begin using that particular structure progressively more correctly. Any efforts to approximate correct use of new language structures were positively reinforced before being recast. I explicitly discussed with the students the need to make mistakes in order to learn and the most successful learners would be those who made attempts without having to get it exactly right straightaway. Efforts were always praised to ensure students were confident and motivated to make approximations.

3.9.3 Tools Development Continued

3.9.3.1 Ngā Kāri Matapaki

By the end of week 10 the students were able to use Te Anga Putanga Ako (2) confidently to discuss their and others' writing as a whole group and independently in pairs. Students were now identifying what they wanted to learn next, from Te Anga Putanga ako (2), to develop their

writing for a range of purposes including writing to pen pals, writing narratives and information reports for the class blog, and writing recounts for the class and school newsletters.

As texts written in Māori were an easily accessible source of fluent Māori language models that could provide crucial language input, it was important to support students to analyse a range of those texts more deeply to develop their own language skills according to the outcomes that they choose from Te Anga Putanga Ako (2) as their next learning steps.

To support students to analyse written texts I had developed a set of reading scaffold cards which had a number of questions that prompted students to notice and analyse a range of language features when reading books. The cards were called Ngā Kāri Matapaki (*discussion cards*) (appendix E). The questions on the cards helped students to focus their attention on specific features of writing that modeled the matrix outcomes they had already become familiar with. Each conference card focussed on a particular section from Te Anga Putanga Ako (2), i.e. aheinga reo, puna reo, and rautaki reo. Students could use the vocabulary and sentence structures in the questions to model their answers on.

In week 10 of the study I introduced the Kāri Matapaki to the students. We began using the cards as a group in shared reading. First we all had the same card and discussed what each question meant, once again using translanguage strategies. Students then answered the questions in relation to the story that we shared as a group. Where students were unsure I modeled answering the questions in relation to the shared book. Over consecutive shared reading lessons the group of students discussed each of the cards respectively. Once all cards had been discussed as a group, I allowed individual students to choose which card they wished to discuss at each subsequent shared reading session. The cards were very popular and had the students engaging with shared texts at a much deeper level than previous lessons.

Over the remaining weeks of the study, students continued to develop their writing to published standard for a range of purposes including sharing on the blog. They engaged in regular self and peer assessment of their writing and continued to use the Kāri Matapaki to analyse language features in written texts that they could apply to their own writing. I also provided group and individual lessons for students who needed or wanted specific skills development, such as grammar, punctuation, or specific language features like the use of passive verbs or metaphors.

3.9.4 Intervention Differentiation

By week 11 of the study it was becoming clear that one of the students (student 5) was not able to engage with Te Anga Putanga Ako (2) or the Kāri Matapaki as confidently as the other student participants. I needed to modify the programme and the tools to meet her/his needs.

To begin, I cut Te Anga Putanga Ako (2) up so that student had only one level and section of outcomes to concentrate on at a time. This was to reduce the visual information that he/she had to concentrate on and the quandary that I hypothesised was created by too many choices.

3.9.4.1 Ngā Kāri Matapaki (Teina)

I also developed a simpler set of Kāri Matapaki (Kāri Matapaki Teina) that he/she began to engage with more easily (appendix F). With these modified scaffold tools, student 5 was able to remain in the same peer group aided by supports that were more appropriate for his/her level. He/she was also made a tuakana (senior peer) to some of the teina (younger students) who he/she was able to teach to use the new Kāri Matapaki Teina. This practice of tuakana-teina has roots in traditional Māori pedagogies and is common in Māori medium contexts. It is akin to peer tutoring and has been shown to increase both tuakana and teina

achievement (Macfarlane, 2004; Pihama, Smith, Taki, & Lee, 2004; Tangaere, 1997).

3.9.5 Midway Interviews

In week 10 individual semi structured interviews were conducted by a local Resource Teacher of Māori who was known to the student participants. The interviews were conducted to provide an opportunity for students to share any issues they had with the research with someone other than the researcher, who was also their classroom teacher. The interviews also provided data on developing shifts in students' ability to share their ideas in te reo Māori, and any individual needs they had that could guide the continuing foci of the study intervention.

After the individual interviews the students asked me if they could be interviewed as a group as they felt less nervous when interviewed together. I then interviewed the students as a group.

3.10 Phase Three - Post Study Data Collection

In week 20 of the study, students completed another asTTle writing assessment which was moderated by the same two RTMs who moderated the week one samples. I also conducted post study individual and group semi structured interviews. The results of this study are presented in chapter four.

Chapter 4: Results

4.1 Introduction

The current study introduced interventions to a Māori medium level 1 immersion classroom with the aim of increasing students' te reo Māori academic oral language proficiency. The rationale for the intervention was based on the synthesis of a number of international second language research findings, which together provided a set of principles for consideration in second language programmes (Ellis, 2005). The study posited that the practice of self and peer assessment, supported with newly developed language scaffold tools, would support the principles outlined in the research for optimal second language acquisition and thereby raise the Māori medium student participants' te reo Māori academic oral language proficiency.

The study involved the development and introduction of a matrix of leveled literacy outcomes, Te Anga Putanga Ako, to scaffold students' self and peer assessment discussions in their writing programme. The Kāri Matapaki were also introduced to support students to develop their language through analysing written texts in the reading programme.

The eight students in the study participated in the intervention programme for 20 weeks. Their oral and written language proficiency was measured in week one and again in week 20 at the end of the 20 week study.

Qualitative analysis of student conversations pre, during and post study was undertaken in order to identify the nature of the development of students' academic oral language acquisition throughout the study. In these analyses, students' developing ideas about their writing programme, writing curriculum and personal learning journeys were examined.

Quantitative analyses were also undertaken of the interviews conducted in week one and again in week 20 of the study. Te reo Māori interviews were analysed in order to identify any shifts in the quantity of te reo Māori students used to describe and discuss aspects of their writing programme and their own learning (see appendix G for examples of interview transcripts). English interviews conducted in week one were also analysed to measure any differences in the quantity of language students were able to use to share their ideas in their first language, English, as opposed their second language, te reo Māori.

The remainder of this chapter firstly presents descriptions of the types of ideas students' were able to share in te reo Māori and English about their writing programme and learning at the beginning of the study. Then the shifts in their ability to share their ideas with the assistance of the intervention language scaffolds during the study are described. Next, quantitative data are presented to show shifts in the quantity of te reo Māori students used pre and post study, and a comparison of pre and post interview responses provides a description of the types of language and ideas that made up those shifts. Finally, quantitative analysis of changes in writing pre and post intervention is then presented. The chapter concludes with a summary of all the research findings.

4.2 Student Ideas About Their Writing Programme in Initial Interviews

In the week one interviews, students were asked a number of questions about their learning in their classroom writing programme (appendices A & G). The following interview response samples show that students were able to share a limited number of ideas about their writing programmes. The homophone and onomatopoeia lessons referred to in many responses were in reference to the students' English writing classes. There was little reference to learning that was happening in the te reo Māori writing classes. In the main, students were not able to use te reo

Māori to describe what they were learning to do in any depth. Where there were answers, students used mainly stand-alone naming words accompanied with shrugs indicating not knowing.

Question 1: Whakamārama mai he aha ngā mahi, ngā ngohe rānei o te hōtaka tuhituhi i roto i tō akomanga? (What do you do, what are the activities, in the writing programme in your classroom?)

Student 1: “Ko te tuhi māhorahora, tuhi a ringa, pānui me te tuhituhi.”
(Diary writing, handwriting, reading and writing.)

Student 4: Ko te tuhi parakatihi, te tuhi māhorahora, me te pānui.”
(Draft writing, diary writing and reading.)

Student 5” Kāore au i te mōhio.”
(I don’t know.)

Student 7: ”Kāore au i te mōhio.” (Teacher prompt, “Tuhi parakatihi?”) “Ae tuhi parakatihi, tuhi a ringa me te tuhi māhorahora.”
(I don’t know. [Teacher prompt, “Draft writing?”] Yes, draft writing, handwriting, and diary writing.)

Student 8: “Ki te tuhi i aku whakaaro.”
(To write my thoughts.)

Question 2: Tēnā me whakamārama mai, i roto i te mahi tuhituhi kei te ako koe i te aha i tēnei wā?

(Tell me what you are learning to do in your writing programme at present.)

Student 1: “Ki te mōhio ngā tohutohu mō ngā kai me ngā hāngi....me... ngā robots me ngā buildings.”
(To know instructions for food and hāngi... and... robots and buildings.)

Student 2: “Te onomatopoeia me te homophones me te recounts.”

(Onomatopoeia and homophones and recounts.)

Student 6: “Kāore i te mōhio...kei te ako tuhituhi.”

(I don't know... Learning writing.)

Student 7: “Ngā onomatopoeia me ngā homophones.”

(Onomatopoeia and homophones.)

Student 8: “Ki te mahi taku tuhituhi.”

(To do my writing.)

Question 5: He aha nga rautaki i mahia e koe mo te tuhituhi pai?

(What are the strategies you use to write well?)

Student 1: Ko te mahere, aa, yea.”

(A plan, ah, yeah.)

Student 3: “Kāore au i te mōhio, mā te...”

(I don't know, by...)

Student 4: “Te brainstorm.”

(A brainstorm.)

Student 5: “Kāore au i te mōhio.”

(I don't know.)

Student 8: “Ka tuhi pai au.”

(I write well.)

4.3 Māori-English Interview Comparisons

The initial interviews in week one were conducted in te reo Māori and students were expected to respond in te reo Māori. Immediately after the te reo Māori interviews the students were asked the same questions in English and allowed to answer in English. This was to compare the ideas students could share in both languages and thus enable the analysis of any variance to differentiate between possible lack of ideas as opposed to ability to articulate any ideas in te reo Māori.

Table 2

Total Māori and English words spoken in first interviews

Student	Total Words in Māori Responses Wk 1	Total Words in English Responses Wk 1
Student 1	53	62
Student 2	42	347
Student 3	67	82
Student 4	43	99
Student 5	39	43
Student 6	48	64
Student 7	58	69
Student 8	34	47
Mean	48.00	101.63
Standard Deviation	10.84962	100.76

A paired samples t-test was conducted to compare the number of words spoken in the te reo Māori interviews with the number of words spoken in the English interviews. There was not a significant difference in the

number of words spoken in the responses to the Māori interviews (M=48.00, SD=10.85) and the English interviews (M=101.63, SD=100.76; $t(7)=1.4749$, $p=0.1837$). By conventional criteria the difference for the group as a whole is not considered to be statistically significant.

The overall result above could be interpreted as an indication that students generally had limited ideas to share about their writing and personal learning journeys, and that their second language proficiency was not necessarily the major or only factor limiting their responses in the Māori interviews. However an analysis by student indicates that some individual students did respond to interview questions in English with many more words than they were able to share in te reo Māori.

Student 2 showed the greatest difference of words spoken between Māori and English interviews. This was because student 2 was a highly motivated student who had already begun to identify her own learning goals in the English writing programme. She was able to discuss the learning outcomes and success criteria from that programme and enjoyed discussing her ideas about her own learning. She was not proficient enough to articulate the same range and depth of ideas in te reo Māori. However her increased ability to share her ideas in te reo Māori by week 20 of the study is evidenced in the week 20 interview data.

Samples of student responses to questions one and two are provided below to show the types of ideas students could share in English as opposed to Māori in the week one interviews.

Question 1:

Māori: Whakamārama mai he aha ngā mahi, ngā ngohe rānei o te hōtaka tuhituhi i roto i tō akomanga?

English: What do you do in your writing programme in your classroom?

Student 2:

Māori: “Kei te ako ahau ki te haere ki te ...next level.”

English: “We usually go away and write recounts and then we go on the mat and we listen to other people’s stories and we have like a checklist... The checklist is, we’ve got heaps of stuff on it, like the five senses and the six servants and the onomatopoeia and the homophones, and see if you’ve got them right. If you get basically all of them, you’re almost up to level three; or if you get half of them, level two; or some of them, level one.”

Student 4:

Māori: “Ko te tuhi parakatihi, te tuhi māhorahora, me te pānui.”

English: “Learning punctuation and instructions and homophones and onomatopoeias.”

Student 6

Māori: “Aaa... ngā tuhi māhorahora me tuhi parakatihi me tuhi a ringa.”

English: “Umm, onomatopoeia me homophone me nga recounts... A homophone is a word that sounds alike but has different spelling and different meanings.”

Question 5

Māori: He aha ngā rautaki i mahia e koe mō te tuhituhi pai?

English: What strategies do you use to write well?

Student 1:

Māori: Ko te mahere, aa, yeah.

English: “Brainstorm... and... ah... Yeah, I think that’s what I use .”

Student 2:

Māori: “Ka tuhi pai au.”

English: “Just by learning of the games that help me remember and also kinda a bit songs and rhyming words.”

Student 6:

Māori: “Ngā pukapuka (ko tehea) Kāore i te mōhio.”

English: “I use my slope card...” [What about for story writing?] “Um, put some six senses and five servants and make my writing interesting...”
[What are the six sevants?] “Where, why, who, what, when and how.”

4.4 Students’ Scaffolded Language Development

The week one interviews showed clearly that students’ ability to share their ideas about their writing programme and learning in te reo Māori was limited compared to their ability to share ideas in English. Students were totally reliant on me as the teacher to direct their learning next steps and achievement success criteria.

After the week one interviews the students were introduced to Te Anga Putanga Ako and Ngā Kāri Matapaki for use as language and self and peer assessment scaffolds in their literacy programme. The following section presents a snapshot of students’ peer discussions using Te Anga Putanga Ako as a language scaffold to assess their own writing in week 10 of the study. The transcript samples show students’ increased ability to discuss their literacy learning with scaffold supports as compared to the week one interviews.

4.4.1 Te Anga Putanga Ako

Week 1 interview responses show that at the beginning of the study students did not have the Māori language to discuss writing in any depth. Te Anga Putanga Ako was introduced to provide writing outcomes for

students to self-assess against. While students referred to the matrix for ideas to assess their writing, it also provided a model of language vocabulary and structures that students could use to scaffold their self and peer assessment discussions about their own writing.

Early in the study I modeled the use of the matrix when assessing text in shared books. I modeled by discussing one matrix outcome in relation to a shared text per lesson. Students then practised using the language in pairs where it was anticipated that in smaller groups they would be willing to attempt using the new language more readily than they would in larger groups (Gibbons, 2002).

The following extract reflects students' developing ability to use Te Anga Putanga Ako language and ideas independently of the teacher to have a meaningful discussion about their writing in week 10 of the study. In these two respective discussions each student is holding their writing sample and referring to a copy of Te Anga Putanga Ako (2) for ideas and language prompts.

Week 1 discussions:

Week one interviews show that in week one none of the students could discuss what they could do in their writing, in te reo Māori, in any depth or with any specificity. When given a copy of Te Anga Putanga Ako for the first time to assess their own writing these students simply shrugged their shoulders and typically replied with, "Kāore au i te mōhio" (I don't know).

Week 10 discussion: Student 3 and student 6

Student 3: "Ki tō whakāro kei whea koe i runga i te anga putanga ako?"
(Where do you think you are on the anga putanga ako?)

Student 6 "Ki aku whakāro he taumata toru ahau nōtemea he kōwae mō te whakamāramatanga i te kaupapa."
(I think I'm a level three because there's a paragraph explaining the topic.)

Student 3: “Pānui mai te kōwae e pā ana ki te kaupapa.”

(Read me the paragraph about the topic.)

Student 6: Reading her writing, “Kia ora. Kei te kōrero au mō te hīkoi mō Matariki. I te Rāapa te waru o Pipiri ka whakarite a Te Awa Rau ki te haere ki Matariki.”

(Hello. I am speaking about the walk for Matariki. On Thursday the 8th June, Te Awa Rau got ready to go to Matariki.)

Student 3: “Ka pai.”

(Well done.)

Student 6. “Ki tō whakāro kei hea koe i runga i te anga putanga ako?”

(Where do you think you are on the anga putanga ako?)

Student 3. “Ki tōku whakāro kei runga au i te taumata toru nōtemea kei ahau he tapanga mo te tuhinga me ngā kōwae hei whakamārma i te kaupapa.”

(I think I’m on level three because I’ve got a title for my writing and a paragraph explaining the topic.)

Student 6. “Me pānui mai tō tapanga me ngā kōwae hei whakamārama i te kaupapa.”

(Read me your title and the paragraphs explaining the topic.)

Student three goes on to read her title and various paragraphs of her writing.

Student 6. “Ae, ka pai, he taumata toru koe. He aha tō whainga inaianei.”

(Yes, that’s good, you are a level three. What are you learning to do now?)

Student 3: “Kei te ako au ki te tāpiri atu i ētahi kupu āhua mō ngā kiripuaki me ngā wāhi.”

(I'm learning to add describing words for my characters and the places.)

Week 10 discussion: Student 1 and Student 4.

Student 4: "Ki aku whakāro mō tāku tuhinga he taumata toru me te hāwhe nātemea he tapanga mō taku tuhinga, he kōwae mō te whakamāramatanga, nui atu i te rua ngā kōwae hei whakāhua i te kaupapa...aaaa... hei he whakāro whānui hei whakakapi i te tuhinga."

(I think for my writing I'm a level three and a half because there's a title for my writing, a paragraph for the explanation, there are more than two paragraphs elaborating on the topic,... ah... there's a conclusion to end the writing.)

Student 1: "Kei whea te kōwae mō te whakamāramatanga i te kaupapa?"

(Where is the paragraph explaining the topic?)

Student 4 reads his introduction paragraph out, "I te Rātu te rua tekau mā toru o Hune ka whakatūria e te whānau o te Wharekura he pō whakangāhau hei whakanui i a Matariki."

(On Tuesday the 23rd of June, the wharekura held an entertainment night to celebrate Matariki.)

Student 1: Ae kei te whakāe au he taumata toru koe mō te (inaudible) nōtemea he tapapanga mō tēnei tuhinga, he kōwae mō te whakamāramatanga i te kaupapa, he whakāro whānui hei whakakapi i te tuhinga."

(Yes, I agree you are a level three for... [inaudible]... because there's a title for the writing, a paragraph explaining the topic and a conclusion to end the writing.)

4.4.2 Ngā Kāri Matapaki

When the student participants were able to identify next steps on Te Anga Putanga Ako for their writing development they then needed support to be able to identify examples of those next steps in other people's writing to

use as models for their own writing. To meet this need Ngā Kāri Matapaki were created and introduced in week 10 of the study. Ngā Kāri Matapaki provided scaffolds for the students to identify and discuss language features in books that they could transfer to their own writing to meet their identified goals from Te Anga Putanga Ako.


While Te Anga Putanga Ako had lists of specific writing outcomes for students to aim for, Ngā Kāri Matapaki had questions which supported them to identify and discuss those outcomes in written texts. The aim of the questions on the cards was to prompt students to make the connection between what features writers used to make their writing effective and why they choose those features, and what the students themselves needed to do to improve their own writing.

Ngā Kāri Matapaki were introduced to the students in the same scaffolded way as Te Anga Putanga Ako had been. Firstly I modeled the use of the cards one at a time in shared reading sessions. Then the students were supported to try them in pairs, and then in groups. Once familiar with their use students chose cards at the beginning of a shared reading session. During or after the reading of the book students made observations about the text according to the questions on their card, using the cards question structure as a scaffold for their answers or comments.

Extracts of a shared reading discussion, using the cards as prompts and language scaffolds, are presented below in Figures 2, 3 and 4 to illustrate the typical rich discussions that could be scaffolded from the use of the Kāri Matapaki. The following three students had chosen a separate card each and were responding to a book shared with the group in week 15 of the study. The story is about a father who likes to wear an old worn-out hat, despite his family not liking it. The hat turns out to be very handy as a costume piece for one of the children in a school fancy dress event / competition. The child wins the fancy dress and the father reminds the family of how they had mocked his precious hat.

Ngā Kiripuaki

1. Kōwhiria kia rua ngā kiripuaki.
2. Kōwhiria kotahi te kōrero e whakaahua ana i te āhua o ia kiripuaki.
3. Kōwhiria kōtahi te kōrero e whakaahua ana i ngā kare o roto o ia kiripuaki.
4. E rite ana tētahi o ēnei kiripuaki ki tētahi tangata e mōhiotia ana e koe?
5. Matapakihia ō whakaaro ki tō roopu pānui



Student 1 had chosen the Ngā Kiripuaki (The Characters) card as his/her focus for the text. In this response to the book he/she chose to respond to question four on the card, which asks, ‘E rite ana tētahi o ēnei kiripuaki ki tētahi tangata e mōhiotia ana e koe?’ (Are any of the characters like someone you know?)

Student 1: “Ki aku whakaaro he tangata ōrite te pāpa ki taku pāpa.

Kaiako: “He aha te ōritetanga?”

Student 1: “He ti..aaa.he...he tarau tino pohara tāna engari i kōrero ia he tino pai ngā kara ki a ia.”

Student 1: “*I think the father is like my father.*”

Teacher: “*What are the similarities?*”

Student 1: “*Ah.. Ti.. Ah... Ah, he’s got an old pair of trousers but he says he really likes the colours.*”

Figure 2. Shared reading discussion extract using the Kāri Matapaki ‘Ngā Kiripuaki’.

Student 8 had chosen the āheinga reo (purposes for writing) card as his/her focus for the text. In this response to the book he/she chose to respond to question one on the card, which asks, 'Ki ōu whakaaro he aha te momo tuhinga?' (What do you think the text type is?)

Student 8: "Ki aku whakaaro he tuhi paki tēnei tuhinga nōtemea kāore te kai tuhi i purua..."

Kaiako (Recasting): "I tuhi, kāore te kaituhi i tuhi"

Student 8: "Kaore te kai tuhi i tuhi te rā mo te pukapuka...kāore te kaituhi i tuhi i nga pārongo mō te tuhi pono."

Kaiako: "He aha ngā pārongo mō te tuhi pono?"

Student 8: "Te rā me te um marama, me te wā."

Student 8: "I think this is a narrative because the writer didn't put..."

Teacher (recasting): "Didn't write, the writer didn't write."

Student 8: "The writer didn't write the day for the book... The writer didn't write the information for a non fiction text."

Teacher: "What is the information for a non fiction text?"

Student 8: "The day and the month and the time."

Āheinga Reo

1. Ki ō whakaaro he aha te momo tuhinga?

3. He aha te putake o tēnei tuhinga?

2. He aha ētahi āhuatanga ō te tuhinga e tohu ana i te momo tuhinga.

4. He tuhinga anō e mōhiotia ana e koe e pēnei ana te momo, te kaupapa rānei?

5. Matapakihia ō whakaaro ki tō roopu pānui.



Figure 3. Shared reading discussion extract using the Kāri Matapaki 'Āheinga Reo'

Puna Reo

1. Kōwhiria kia rua ngā momo timatatanga rerenga hōu.
2. Kōwhiria tētahi kupu mahi hāngū.
3. Kōwhiria kia rua ngā rerenga mārō.
4. Kōwhiria tētahi kiwaha hei whakamārama ki tō roopu.
5. Whakaritea ō pārongo kia matapaki ai ki tō roopu.



Student 4 chose the puna reo (conventions of print) card. In this response he/she was referring to question 2.

Student 4: “Kua kōwhiri au i tētahi..aa...kua kite au i tētahi kupu hāngū, ko whakahaeretia.”

Kaiako: “He aha te tikanga ō taua kupu te whakahaeretia?”

Student 4: “Aaa te haere ki tētahi atu wāhi?”

Kaiako: “Ahua, engari ko te ‘tia’ kua tapiri atu ki te mutunga o te kupu e tohu ana kua mahia te kupu mahi ki te mea e whai ake ana, kātahi nā wai i mahi. Kite koe, kua whakahaeretia te pō whakangāhau... e te kura.”

Student 4: “Oh.”

Student 4: “*I found a.. ah... I saw a passive verb. It is whakahaeretia [to organise, make happen].*”

Teacher: “What is the meaning of whakahaeretia?”

Student 4: “To go somewhere else?”

Teacher: “Kind of, but the tia on the end of the verb means the verb has been done to the thing that follows and then by whoever did it. You see, the fancy dress has been organised... by the school.”

Student 4: “Oh.”

Figure 4. Shared reading discussion extract using the Kāri Matapaki ‘Puna Reo’

When introduced to Ngā Kāri Matapaki early in the study students were not able to discuss them independently of the teacher. Typical responses when students were asked to discuss a card in relation to a shared story were silence and, “Kāore i te mōhio, Whaea.” (I don’t know, Whaea). The discussions above show a marked shift in students’ ability to discuss their ideas in te reo Māori with support from the language scaffolds.

4.5 Shifts in Quantity of Student Language Pre and Post Study

The following quantitative analysis of student interview responses from week one and week 20 of the study shows that students were able to share significantly more ideas about their writing programme at the end of the study than they could at the beginning. The qualitative description of those shifts that follows shows clear links to Te Anga Putanga Ako and Ngā Kāri Matapaki language models.

4.5.1 Whole Group Pre and Post Interview Responses

Table 3 below presents the total number of Māori words spoken in individual students’ responses to the eight interview questions in the Māori interviews in week 1 and again in week 20 of the study.

Table 3

Total Number of Māori Words Spoken in Student Interview Responses Pre and Post Study

Student	Total Māori Words	Total Māori Words
	Wk 1	Wk 20
Student 1	53	286
Student 2	42	241
Student 3	67	244
Student 4	43	235
Student 5	39	62
Student 6	48	204
Student 7	58	169
Student 8	34	157
Mean	48	199.75
Standard Deviation	10.84962	69.80330

A paired-samples t-test was conducted to compare the number of words spoken in week one interview responses to the number of words spoken in week 20 responses. There was a significant difference in the words scores across all students in week one ($M=48.00$, $SD=10.84962$) and the words scores across all students in week 20 ($M=199.7500$, $SD=69.80330$); $t(7) = -6.537$, $p=.0003$. These results show that there was a significant increase in students Māori language output following the study intervention that was administered over a 20 week period.

4.5.2 Pre and Post Interview Responses by Student

The mean number of words spoken in responses by each student in week one and week 20 interviews is shown in *Figure 5*.



Figure 5. Mean Number of Words in Student Responses

The above data analyses show that students averaged 5.8 Māori words per response in week one. The average number of words in question responses for each student rose significantly to 25 in week 20. The average word increase from week one to week 20 was 19 words per question, with a standard deviation of 8 words. Increases in mean word scores ranged between 3 and 29.

Student 1 made the most gains. His/her average word count rose by 29 words against the average increase of 19 words. Student 5 scored an average of 3 words under the standard deviation bottom limit. He/she made the least gains of all participants with an increase of an average of only three words per response in week 20 compared to the group's average increase of 19 words.

4.5.3 Student 5

Student 5 was a student who had progressed at much slower rate across all curriculum areas than his/her same age peers since entering school at five years old. He/she was achieving at a lower level in Māori reading and writing than the other participants at the start of the study as assessed by asTTle tuhituhi (writing) and pānui (reading), and pānui haere (Māori medium running records). He/she was also less confident to speak te reo Māori.

Student 5 was included in the study so that his/her mana would be protected (an important consideration in Māori medium contexts). If left out he/she would have been the only one of a group of same year level peers not in the study. This would have meant that he/she would not have been included in the group when they were learning their literacy as he/she usually was, albeit with differentiated teaching to meet his/her needs. Although I anticipated that he/she might find the study intervention more challenging than the other participants I wanted to see if his/her progress might still be accelerated. I also believed that possible damage to his/her mana and self-esteem if he/she was excluded from his/her usual peer group was not in his/her best interests.

Like the other participants student 5 was unable to understand or use Te Anga Putanga Ako or Kāri Matapaki independently at the beginning of the study. He/she did not assimilate the new knowledge and skills as quickly as the other students. He/she struggled for most of the study duration. When I finally focussed on him/her more specifically, late in the study, I realised that I needed to develop tools that were more appropriate for his/her abilities.

Student 5 started to use the language structures in the modified tools more easily. However the modifications may have occurred too late in the

intervention phase (week 15) to make a great impact before the end of the 20 weeks.

4.5.4 Total Words In Responses by Question

A comparison of pre and post interview responses by question was conducted to identify any areas of noteworthy development, which could then be analysed qualitatively to specify the development in terms of shifts in particular ideas relating to their writing that the students were able to share. The following chart compares the mean number of words spoken by the participant group for each question in week one and week 20 of the study.

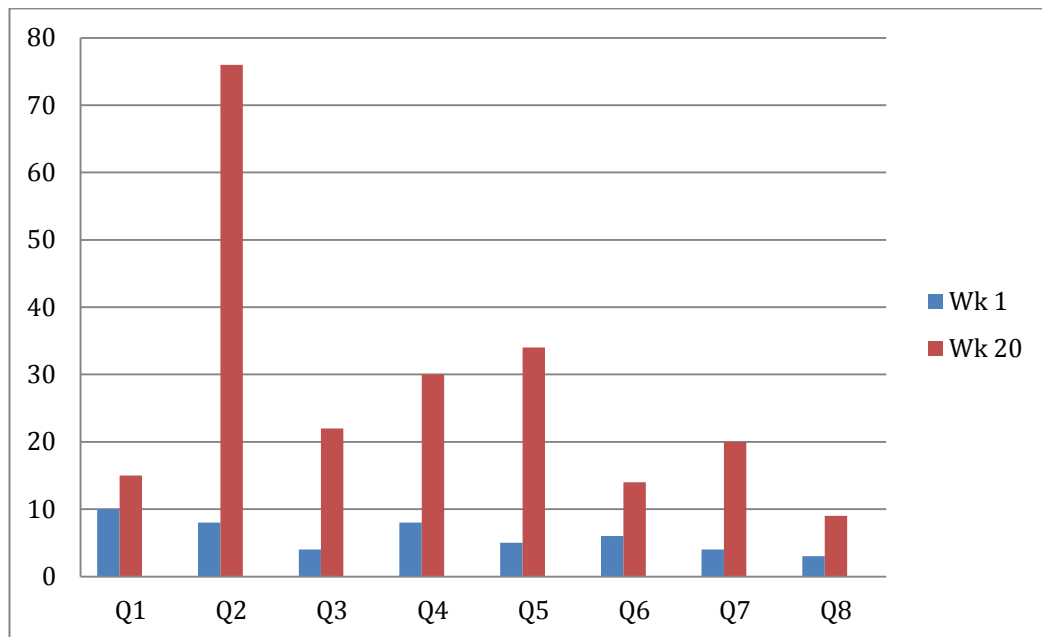


Figure 6. Total Numbers of Words in all Student Responses by Individual Questions.

From week one to week 20 there was an increase of an average of 22 words spoken in the responses to each question. The analysis shows that the largest difference in spoken words occurred for question two. There were an average of eight words in student responses to question two in week one. By week 20 there were an average of 76 words spoken in student responses to question two.

4.5.4.1 Students' Developing Ability to Share Ideas About Their Writing Programme in Te Reo Māori

Question two was, “Tēnā me whakamārama mai, i roto i te mahi tuhituhi kei te ako koe i te aha i tēnei wā?” (What are you learning in your writing programme at the moment?). By week 20, students were able to discuss a great many more ideas about what they were learning to do in their writing programme than they could in week one. The qualitative analysis of student responses below explores further the development of student ideas around this question over the 20 weeks of the study. In particular the transcript samples indicate direct links between the language of Te Anga Putanga Ako and the language students used to answer question two in the week 20 interviews.

Question 2.

Teacher: “Tēnā whakamārama mai, i roto i tou mahi tuhituhi kei te ako koe i te aha i tēnei wā?” (Tell me what you are learning to do in your writing programme at the moment.)

Student 3

Week 1: “Kei te ako au ki te mahi onomatopoeia me te recounts, me te homophone me era atu.

(I am learning onomatopoeia, and recounts, and homophones and other things).

Week 20: “ Umm kei te ako au ki te whakanui aku pārongo matua...ki te tapiri atu ētahi atu kōrero hei tautoko i te pārongo matua...he whaingā taumata whā tēnā...umm me kei te ako au ki te tuhi ētahi momo timatatanga rerenga...umm..me ngā piko me ngā tohu kōrero.”

(Umm, I'm learning to extend my main ideas... to add more information to the main idea... That's a level four outcome... Umm... And commas and speech marks.)

Student 2

Week 1: Te onomatopoeia me te homophones me te recounts.”

(Onomatopoeia and homophones and recounts.)

Week 20: “Umm i tēnei wā kei te ako au ki te tuhi kupu hei whakātu i ngā kare-o-roto o ngā kiripuaki..aa..me te whakamahi tika i nga kupu mahi hangū...aaa..me kei te ako au ki te matapaki i nga āhuatanga reo e pā ana ki te momo tuhinga...mmm like...tuhi whakāhua aa..tuhi taki...tuhi paki..ae.”

(Umm, at the moment I’m learning to write words that describe the feelings of characters... ah... and to write passive verbs correctly... aah... and I’m learning to discuss the features that indicate the text type... mmm, like... descriptive writing, ah... fiction and non-fiction,... yeah.)

Student 5

Wk 1 “Umm..Kaore au i te mohio.”

(I don’t know.)

Wk 20: “Umm kei te ako au ki te tuhi mmm paragraphs...mm... nga pu matua me nga irakati.”

(I’m learning to write paragraphs,... mm... capital letters and full stops)

Student 6

Wk 1: Kaore i te mohio...kei te ako tuhituhi.”

(Don’t know... Learning writing.)

Wk 20: “Aaa kei te ako au ki te...umm...ki te tuhi i nga momo timatatanga rerenga...me te...whakamahi i nga kupu mahi haangu...they’re hard...me te mahi i nga mahere whakaaro tika mo te momo tuhinga e tuhingia ana e au.”

(I’m learning to write types of sentence starters... and... to write passive words... They’re hard... And to use the correct planning tool for the type of writing I’m going to write.)

Student 8

Wk 1: “Ki te mahi taku tuhituhi?.”

(To do my writing – *this reply was posed as a question*)

Wk 20: “ [Giggle] That’s easy to... Kei te ako au ki te raupapa aku parongo ki te kowae...me kei te ako au ki te tuhi kupu aahua i roto i taku tuhituhi..mmm... Yeah, that’s it... Kei te mohio au ki te tuhi i nga pu matua me nga irakati..me nga piko!”

(I’m learning to arrange my ideas into paragraphs... and I’m learning to write adjectives into my writing... mmm. I know how to write capital letters and full stops... and commas.)

The homophone and onomatopoeia lessons referred to in most responses in week one were in reference to the students’ English writing classes. There was little reference to learning that was happening in the te reo Māori writing classes. In the main, students were not able to use te reo Māori to describe what they were learning to do. Where there were answers, students used mainly standalone naming words accompanied with shrugs indicating not knowing. By week 20, however, student participants were able to explain in much more detail what their personal next steps were. Students were able to independantly use literacy specific vocabulary, and specific learning outcomes that they had learnt directly from Te Anga Putanga Ako and Kāri Matapaki to discuss a range of writing goals.

4.6 Analysis of Writing Assessments

The fact that oral language underpins the development of written language has been well established (Aldridge, 2005; Cambourne, 1998; Clay, 1998; Vygotsky, 1962; Glynn, Wearmouth, & Berryman, 2006). There is also ample evidence to show the accelerated progress that students have made in writing as a result of developing their self and peer assessment knowledge and practice (Clark, 2005; Black and Wiliam, 1998b).

As the current study introduced students to new tools and practices that aimed to scaffold both their self and peer assessment development and their oral language development simultaneously it was probable that the interventions in this study would cause improvements to both students' oral language proficiency *and* their written language skills. Accordingly the study planned to measure students' written language development as a secondary focus in order to add to the limited corpus of research into literacy development in Māori medium settings.

To measure any changes in students' writing across the intervention programmes, samples of their writing were assessed using the asTTle tuhituhi (writing) assessment tool at the beginning of the study and again at the end. The genre was tuhi taki (recount writing). As already noted, two RTMs moderated the pre study writing assessments. The same two RTMs then moderated the post study writing assessments.

The asTTle assessment tool is the only standardised tool available to measure Māori medium students tuhituhi (writing) achievement. The tool calibrates students' raw scores to report against three curriculum sub-levels: basic, proficient and advanced within the 1993 curriculum for Māori medium programmes (Ministry Education, 1993). Table 4 below outlines the shift in students' writing achievement over the 20 weeks of the study in terms of the calibrated asTTle scores.

Table 4:

Student pre and post study writing scores.

Student	Week 1	Week 20	Progress over 20 weeks
	Sublevel	Sublevel	
Student 1	3a	4a	3 sub levels
Student 2	3p	4b	2 sub levels
Student 3	3a	4a	3 sub levels
Student 4	2a	4b	4 sub levels
Student 5	2b	2p	1 sub level
Student 6	3p	4b	2 sub levels
Student 7	3b	4a	5 sub levels
Student 8	3a	4p	2 sub levels

Progress norms for tuhituhi achievement as measured by the asTTle assessment tool indicate that students are expected to progress one curriculum level, that is three sub levels, every two years. An accelerated rate of progress is identified as anything greater than 3 sub-levels every two years (Ministry Education, 2009).

Over the 20 weeks of the study the participant students progressed an average of 2.75 sub levels. The lowest progress score was 1 sub level achieved by student 5 whose learning issues have already been discussed. This result is still considered accelerated according to the progress norms. The largest gain was 5 sub levels.

According to the asTTle progress norms all students in this study made significantly accelerated writing progress. As the main aim of this study was to raise students' oral language proficiency a deeper descriptive analysis of students' written language developments has not been made.

4.7 Summary

In the current study the practice of self and peer assessment was introduced to Māori medium students in their writing programme to provide a meaningful context for their oral language development. Te Anga Putanga Ako and Ngā Kāri Matapaki were developed and introduced as tools to provide both the writing outcomes and ideas needed for self-assessment discussion and te reo Māori language scaffolds simultaneously.

The study results have shown that the confluence of these study interventions are linked to extremely significant gains in most student participants' oral and written Māori language proficiency over the 20 weeks of the intervention. Students' oral language development was such that their conversational ability is deemed to have moved from Basic Interpersonal Communication Skills to Cognitive Academic Language Proficiency (see chapter two for a discussion on this distinction), as was the aim of this study. The implications of these results are discussed in the following chapter.

Chapter 5: Discussion and Conclusion

The ultimate aim of Māori medium education is for students to achieve high levels of te reo Māori proficiency that will enable them to actively participate in authentic Māori cultural contexts and ultimately become leaders in their world. To date there has been limited research into the classroom practices that raise Māori medium students' oral language proficiency. The current study posited that for Māori medium students the practice of self and peer assessment in their literacy programme would necessarily provide the conditions that are conducive to effective second language acquisition that have been outlined in the research on bilingual education (Ellis, 2005). The practice of self and peer assessment would require and support students to communicate at the advanced academic levels that I believed they were capable of, and that the research deemed crucial to gain the cognitive benefits of bilingualism. Thus arose the research aim, "Raising Māori medium students' academic language proficiency through self and peer assessment."

The study intervention took place in a level one Māori medium classroom in Southland, New Zealand. The eight participant students and the teacher were all second language speakers of te reo Māori, with limited opportunities to hear or use te reo Māori outside of the classroom. In the study the participant students were introduced to a new matrix of writing outcomes (Te Anga Putanga Ako) and discussion prompts for reading (Ngā Kāri Matapaki) which they used to scaffold their self and peer assessment discussions in their literacy programme over the 20 weeks of the study.

5.1 Findings

The research project found that the practice of self and peer assessment, supported by Te Anga Putanga Ako and Ngā Kāri Matapaki intervention

tools caused significant improvement to students' (*and* simultaneously the teacher's) second language proficiency. Students made significant gains in both oral and written language competence. Through the intervention scaffold tools students' (and the teacher's) knowledge of the ideas and academic language of the writing curriculum was developed concurrently with their ability to use that language to communicate those ideas orally. Pre and post interviews showed that via the scaffolds students were able to move from contextualised to decontextualised academic conversations about their learning across the 20 weeks of the study. Their language skills had therefore moved from Basic Interpersonal Communication Skills (BICS) to Cognitive Academic Language Proficiency (CALP, see chapter two for an explanation of this distinction) as was the aim of this study.

5.2 Implications of the study

The need for pedagogical approaches in Māori medium settings which can produce the types of outcomes evident in this study has been highlighted in numerous studies (Benton and Benton, 2000; May and Hill, 2005; Hill, 2010, Ministry of Education, 2010a) including a milestone report on a Māori medium professional development project prepared for the Ministry of Education by Rau et al. (2006). Rau advised that that the challenge remains for Māori medium teachers, who are often themselves second language speakers, to simultaneously develop academic second language proficiency and increasingly decontextualised curriculum knowledge in students who seldom hear the target language outside of the school grounds.

By the end of this study students and myself as the teacher were able to discuss aspects of their writing programme and personal learning goals with significantly more specificity than we had 20 weeks earlier at the beginning of the study. Students were able to communicate using a wider range of literacy specific vocabulary and ideas from the writing curriculum, independently of me as the teacher.

An important implication of this study is that it provides a way forward for teachers in Māori medium contexts who are seeking ways to develop their own and their students' academic language proficiency at the same time as their knowledge of the curriculum. The following section outlines more specifically those interventions that impacted positively on students' language acquisition in this study.

5.3 The Principles of Effective Second Language Acquisition

Although there are a number of well researched principles for effective second language teaching (Ellis, 2005), there is limited empirical evidence of the effectiveness or application of those principles in Māori medium settings specifically. Chapter two outlined Ellis' principles for effective second language acquisition, based on his extensive synthesis of research into bilingual education, and described my pre study ideas about how the practice of self and peer assessment would provide the conditions to support those principles in my Māori medium classroom. The following sections outline those principles that were particularly evident and effective in this study intervention.

5.3.1 Focus on Meaning

Numerous studies have shown that second language students develop better competence in the target language when they are required to communicate for authentic, meaningful purposes (Ellis, 2005; Glynn, 1985; Glynn, Wearmouth & Berryman, 2005). Accordingly, task-based approaches are advocated to provide meaningful, communicative exchanges in the classroom where students are communicating to achieve a purposeful outcome rather than focus mainly on the form of the target language for no real purpose other than the language itself (Nunan, 2004; Skehan, 2003). In reference to English language students, Ovando, Collier and Combs (2003) promote a task-based approach referred to as an

integrated content-based approach where students learn conversational (BICS) and academic language skills (CALP) simultaneously.

To successfully implement the approach teachers need to employ a range of methods to scaffold new language to the learners while at the same time maintaining intellectual academic stimulation and learning. A range of graphic organisers, diagrams, texts and activities can be utilised to encourage, and *require*, students to interact (Gibbons, 2002; Ovando et al, 2003; Ellis, 2005).

In this study students were supported to create a classroom blog to provide a meaningful purpose for their communicative development in te reo Māori. The blog required students to share their learning and ideas with other Māori medium students in New Zealand and their own families. Students knew that their written communications needed to be of publication standard. The blog entries needed to be structurally and grammatically correct. Written blog entries also needed to be interesting for the audience.

With the engaging global purpose set the students were then introduced to Te Anga Putanga Ako to use as a scaffold to self and peer assess their writing in order to improve it for the blog. Te Anga Putanga Ako was a matrix of specific, levelled writing outcomes aligned to the broader expectations of Te Marautanga o Aotearoa (Ministry of Education, 2010a). Students used the matrix as a scaffold to self and peer assess their writing for the blog. They were then introduced to Ngā Kāri Matapaki (discussion cards), which prompted them to notice, analyse and discuss aspects of other people's writing that they could transfer to their own writing if they so chose. These practices provided the meaningful purposes and scaffolds necessary to develop the students' oral language proficiency at the same time as scaffolding their knowledge, skills and language associated with the writing curriculum.

The connection of the students' language development to the te reo matatini (literacy) curriculum was important. Mohan discusses this importance when he warns that we cannot put second language students' academic development on hold while they simply learn the target language. Gibbons (2002) agrees and points out that a student's second language must be developed simultaneously with curriculum knowledge to create meaningful purposes while at the same time extending students' academic knowledge. Rau et al. (2006) have identified this as a current challenge in Māori medium education.

Students' engagement with Te Anga Putanga Ako was immediate. Students were instantly motivated to use it to improve their writing so that they could move up the curriculum levels within it. They were ambitious. By the end of the study they were identifying and discussing their own next steps. They were articulating goals and motivated to achieve them. As evidenced in the pre and post study interviews, students' increased vocabulary and knowledge of te reo Māori structures enabled them to communicate academic ideas with significantly more specificity than they could prior to the study.

5.3.2 Focus on Form

There is debate about the most effective ways to teach grammar and language structure to second language students (Ellis, 2005; Schmidt, 2001). Gibbons (2002) advises that when the language tasks are situated in curriculum contexts the activity itself can help to introduce or recycle grammar or vocabulary as well as the curriculum concepts and knowledge. In this study Te Anga Putanga Ako and Ngā Kāri Matapaki provided models for spoken language that were grammatically and structurally correct. By using these models to guide their responses students were practising correct forms of te reo Māori in the context of the writing curriculum within which they were engaged and motivated to communicate. This process provided an implicit focus on form while

maintaining the meaningful, communicative purpose of sharing ideas about their writing.

Grammar instruction was also given in the form of recasts - corrective feedback (see 2.10.3) when students were talking. When students applied the sentence structures of Te Anga Putanga Ako or Ngā Kāri Matapaki to their conversations I would sometimes recast their sentences if they were grammatically incorrect. Students would then repeat the correct sentence structure after me. By this process students soon began to use correct sentence structures independently of the teacher in their peer and group conversations.

5.3.3 Implicit and Explicit Knowledge

Chapter two discussed the difference between implicit and explicit knowledge of language. Fluent communicators in any language have acquired a bank of implicit knowledge that they are unconscious of but that enables them to communicate effectively. This knowledge is automated to the extent that a speaker can communicate fluently without having to consciously think about the language structures they need to employ. Explicit knowledge on the other hand is conscious knowledge about how the language works. One can access one's explicit knowledge when one meets challenging communicative situations, for example thinking about whether the subject or the verb needs to come first.

Ellis (2005) argues that implicit knowledge needs to be the aim of any second language programme. DeKeyser (1998) asserts that implicit knowledge develops when explicit knowledge is automatised through practise. However Krashen (1988) believes that implicit knowledge develops naturally in meaning focussed communication such as the task based approaches already discussed, supported perhaps by some focus on form. Researchers agree that implicit knowledge is best developed in communicative situations such as task-based approaches.

In this study the task based approach known as an integrated content-based approach was promoted to provide a meaning based context for students' language acquisition. The approach required students to practise language forms in Te Anga Putanga Ako and Ngā Kāri Matapaki to convey meaning. While there was limited teaching of explicit knowledge focus on form was mainly implicit via the practising of the structurally correct language forms in the language scaffolds. The repetition of these language structures meant that students had automatised the structures by the end of the 20-week study. The students' ability to use these structures to confidently communicate ideas about their writing programme without the support of Te Anga Putanga Ako or Ngā Kāri Matapaki in the week 20 interviews showed that the language structures had likely become implicit knowledge by the end of the study.

5.3.4 Input and Output

Māori medium practitioners need to be particularly cognisant of the issue of input and output given the diglossic nature of te reo Māori in New Zealand society. Opportunities for students to hear and produce te reo Māori need to be specifically planned for. In this study the student participants were living in Southland, New Zealand, where only 11.8% of the total population identified as being Māori in the 2006 census. Of that 11.8% only 16.4% reported that they could hold a conversation about everyday things in te reo Māori (Statistics New Zealand, 2011). Therefore most students came from homes where only English was spoken. This community was particularly devoid of Māori language speakers who could provide language input, and expectations and opportunities for output.

Students' Māori language input came mainly from myself as the teacher in their bilingual class at the school they attended. As such I was the major source of their Māori language input. However, I am also a second language speaker with relatively limited proficiency in academic registers of te reo Māori.

Gibbons (2002) points out that in order to promote second language acquisition, teachers must plan for alternatives to the common Initiation Response Feedback (IRF) discourse pattern in classrooms. In the IRF pattern the teacher asks questions, the students reply, and the teacher gives feedback. As an alternative, small group work is advocated to increase the *input* that students receive that is crucial to language development. In small groups students also talk more with each other and so their *output* is increased, another crucial condition for language development (Ellis, 2005; Gibbons, 2002). Small groups require scaffolds to help students employ their second language independently of the teacher.

In this study, students' pair work required them to make sense of the language structures in the matrix and to practice them by applying them to their own and others' written texts. Te Anga Putanga Ako and Kāri Matapaki provided structurally correct language input, albeit written, that the students could read and model their output from.

In their pairs the students had to communicate their ideas to their partner. They had to listen and respond to each other. During the pair learning sessions both students were constantly alternating between listening and speaking. They had higher levels of input and output as compared to sessions where the IRF discourse pattern dominated discussion, and they had scaffolds to support their independent language use.

5.4 Translanguage Strategies

Te Aho Matua advocates that in order for students to assimilate te reo Māori in a society where they seldom hear it spoken outside of the school, they need to be totally immersed in it in the school environment. Therefore in many kura kaupapa Māori settings the use of English as a medium for teaching or learning is strictly limited to formal English language transition

programmes which are added to students' curriculum any time from year 4 to year 7 or 8 in general (Hill, 2010).

However, a study by Lowman, Fitzgerald, Rapira and Clark (2007) found that students made significant gains in Māori literacy levels when they were encouraged to use English, their first language, to process, problem solve, and think more deeply about Māori texts. This was the first empirical study of translanguage application in a Māori medium setting (Hill, 2010).

The current study supports the findings of Lowman et al (2007). In this study I as the teacher and researcher used English to scaffold students' understanding of challenging Māori language structures. When I introduced the language of Te Anga Putanga ako and the Kāri Matapaki I explained what the language meant in English before continuing to model the use of the te reo Māori structures. In this way students instantly knew what the language meant. Using their stronger language to facilitate understanding of their weaker language was an efficient way of supporting students' understanding. As in the Lowman et al (2007) study students were still expected to use te reo Māori when communicating their responses. The research findings reveal that using the students' stronger language, English, to clarify understandings did not detract from their acquisition of te reo Māori.

The studies discussed above point to the need for discussion and debate about the need for Te Aho Matua to reflect effective pedagogical practices that have been found to be effective in Māori medium classrooms to produce higher levels of bilingualism.

5.5 The Teacher as a Second Language Speaker

The disruption to the intergenerational transfer of the Māori language caused by the process of colonisation has meant that many teachers in Māori medium settings are today likely to be second language speakers

themselves (May and Hill, 2005; Hill, 2010; Rau et al, 2006). The level of proficiency amongst these teachers varies widely and the implications are summed up by Hill (2010):

The objectives that remain for Māori medium programmes are twofold. First, that the child develops a high level of proficiency in the Māori language - the language that is not supported at home, and taught at school by a predominantly L2 teaching profession. (p.31).

The issue of second language teachers' personal competency in the target language is a significant one. Research has identified that teacher proficiency in the target language is one of the most critical factors in student achievement in second language classrooms (May et al, 2004).

In this study Te Anga Putanga Ako and Ngā Kāri Matapaki not only scaffolded the students' te reo Māori development but they scaffolded my own second language development as well. In the past I had often felt that I did not have the words or scaffold tools to extend my students' oral language competency beyond basic conversational skills.

After researching the language and skills students were required to know and use to meet the te reo matatini curriculum outcomes I wrote them into Te Anga Putanga Ako and Ngā Kāri Matapaki. I then used the scaffolds to model to the students the use of the outcomes statements and how to turn them into questions and answers. The new tools scaffolded my use of the new vocabulary and sentence structures as I read directly from them. These tools therefore provided input for me as a second language learner, as well as for the students. Te Anga Putanga Ako and Ngā Kāri Matapaki were effective because the structures did not change in the same way that fluent speakers' talk changes in everyday conversations. They provided consistent input in terms of language structure, vocabulary and ideas that I could master along with the students.

Te Putanga Ako provided consistent input in terms of language structures. At the same time we were learning the language, knowledge and skills required in the writing curriculum. The progression of levelled curriculum outcomes allowed for students and myself to learn at our level while offering extension for those wanting to advance their skills.

Although there was no data collected on this aspect of the study, the regular use of Te Anga Putanga Ako and Ngā Kāri Matapaki with the students enabled me to use the new language independently in other contexts by the end of the study. The scaffolds developed my capacity as a second language speaker to provide models of te reo Māori input and curriculum ideas for my Māori medium students that were initially beyond my capability. The conditions of focusing on meaning, focus on form, input and output, that were present for students in this study were also present for me as second language learner, resulting in my own increased Māori language proficiency.

The need to create systems where Māori medium teachers can develop their second language proficiency on the job is an important reality in an education environment where fiscal restraints make such professional development opportunities outside the classroom rarely accessible (Rau et al, 2006). This is a crucial consideration in areas where there are limited proficient models and opportunities or expectations to engage in Māori language conversations outside of the classroom.

5.6 Study Limitations

5.6.1 Threshold Theory

A limitation of this study was that post study interviews were not conducted in English. As the aim of the study was to raise students' Māori language proficiency only their Māori language ability was measured post study. However post study English interviews would have allowed for the

comparison of ideas students could share in their first and second languages. Such a comparison would have allowed for judgements to be made about students' level of bilingualism in relation to the Threshold hypothesis (Cummins, 1976a, 1976b; Toukomaa & Skutnabb-Kangas, 1977). The Threshold hypothesis expounds that bilinguals need to be able to discuss decontextualised academic ideas (CALP-cognitive academic language proficiency) in both their first and second languages to reach the upper level of bilingualism. Here they are deemed to be balanced bilinguals. At this level bilinguals can gain the cognitive advantages of bilingualism that have been identified in the research (see chapter two).

While students in this study were clearly able to discuss decontextualised academic ideas in te reo Māori by the end of the intervention, their ability to discuss the same ideas in English was not measured. The lack of evidence of students' ability to discuss decontextualised academic ideas in English post study means that a definitive judgement of their English CALP cannot be made and therefore neither can a formal judgement be made about their threshold level.

5.6.2 Interventions

This study found that the practice of self and peer assessment and the new language scaffolds improved students' second language acquisition and knowledge of the curriculum concurrently. While the results of this study found that the confluence of the practice of self and peer assessment and the language scaffold tools raised Māori medium students' second language proficiency the study did not determine the separate weighting of influence of the two aspects respectively. Such a determination might allow for teachers to place major emphasis on developing the factors that impact most on students' language acquisition.

5.6.3 Student 5

The initial interventions in this study were not appropriate for the language level that student 5 was achieving at. The intervention was differentiated to meet his/her needs more specifically later in the study but this second intervention was too late to make any measurable difference to his/her oral language ability by the end of the study. Student 5 struggled unnecessarily in the early weeks of the study as a result.

While the intention was to alleviate any whakamā that separating student 5 from his/her peer group would have caused it is likely that his/her feelings of whakamā might have actually been reinforced as he/she struggled to assimilate the new ideas and language of Te Anga Putanga Ako and original Kāri Matapaki as quickly as his/her peers in the early weeks of the study. Differentiated supports for student 5 should have been introduced earlier in the study.

5.7 Further Research

5.7.1 Language Transfer

The ultimate aim of Māori medium education is to develop students' te reo Māori proficiency to a level where they can actively participate in authentic Māori cultural contexts. Accordingly students' ability to transfer their new curriculum language to other contexts would be a logical next research step.

5.7.2 Oral Language Progressions

Te Marautanga o Aotearoa (Ministry of Education, 2010a) describes broad outcomes for students' literacy achievement in Māori medium education. For pānui (reading) and tuhituhi (writing) these broad outcomes have been further specified for each level of the curriculum in the newly released

literacy progressions documents (Ministry of Education, 2011b). However, oral language progressions have yet to be specified beyond the broad curriculum levels of Te Marautanga o Aotearoa. In my experience teaching in Māori medium classrooms students have often been able to communicate at more advanced language levels in reading and writing than they could in communicative oral situations.

Research is needed to investigate whether there are oral language proficiencies that can be reasonably expected at the various levels of Māori medium students' education. Such research could inform the development of oral language progressions to guide Māori medium curricula. While these progressions need to be broad enough to support dialectical and ideological differentiation inherent in local/tribal curriculums they need to be specific enough to support schools and teachers to plan for students' oral language development based on realistic, achievable outcomes. While the task is complex, without these guidelines or benchmarks Māori medium oral language programmes risk ad hoc development and inconsistent expectations for achievement.

5.8 Conclusion

Māori medium classrooms are crucial sites of language transfer that aim to ensure the survival of the Māori language into the future. However today there remains a lack of researched pathways or pedagogies that can raise or assess students' oral language proficiency beyond basic conversational skills.

This study brought together the practice of self and peer assessment and new language scaffold tools in a Māori medium literacy programme. The intervention raised the participant students' academic oral language competency significantly beyond what is normally expected in 20 weeks of schooling.

The study offers Māori medium practitioners an option if they are looking for ways to develop their students' second language proficiency at the same time as their knowledge of the curriculum, at levels appropriate for their age and that will ensure they gain the social and cognitive benefits of high levels of bilingualism. At the same time the study evidences the effectiveness of self and peer assessment for developing Māori medium students' self-managing and metacognitive skills. Applied to all areas of the curriculum this practice presents endless possibilities for supporting Māori medium students to reach their full academic and linguistic potential.

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APPENDIX A: Study Phases

<u>Phase 1</u>	<u>Phase 2</u>	<u>Phase 3</u>
Whānau of Interest Consensus & Initial Data Gathering	Teaching and Learning Interventions	Post Study Data Gathering
<p><u>Week 1</u> Whānau of interest consensus hui. Consents gained for research aims and methods</p> <p>Pre intervention student participant individual semi structured interviews</p> <p>Administration of asTTle tuhituhi assessments</p> <p>AsTTle tuhituhi assessments moderated by two Resource tTachers of Māori (RTM)</p> <p><u>Weeks 1,2,3</u> Development of Te Anga Putanga Ako (1) and Kāri Matapaki</p>	<p><u>Week 3</u> Introduction of Te Anga Putanga Ako (1) and the practice of self and peer assessment to student participants.</p> <p><u>Week 6 & 7</u> Development of Te Anga Putanga Ako (2)</p> <p><u>Week 7</u> Introduction of Te Anga Putanga Ako (2) to student participants</p> <p><u>Week 10</u> Introduction of Kāri Matapaki to student participants</p> <p>Individual semi structured interviews conducted by RTM</p> <p>Group semi structured interviews administered by researcher</p> <p>Development of Kāri Matapaki (teina)</p> <p><u>Week 11</u> Introduction of Kāri matapaki (teina) to student 5</p>	<p><u>Week 20</u> Post intervention individual and group semi structured interviews conducted by researcher.</p> <p>Post intervention asTTle tuhituhi assessments administered, and moderated by two RTMs.</p> <p><u>January 2013:</u> <u>Whānau feedback hui,</u> consent gained to submit thesis. Whānau consents obtained to use video and transcript evidence for further educational purposes</p>

APPENDIX B: Semi Structures Interview Questions

Whakamarama mai he aha tou mahi tuhituhi i roto i tou akomanga?

(Tell me about your writing programme in your classroom.)

Tēnā me whakamarama mai, i roto i te mahi tuhituhi kei te ako koe i te aha i tēnei wā?

(What can you tell me about what you are learning in writing at the moment?)

Pehea koe e mōhio ai he aha tō whainga ako mō te whakapai i tō mahi tuhituhi?

(How do you know what you need to learn to do to improve your writing?)

Pehea koe e mōhio ai kua oti pai tō mahi tuhituhi, kua tae pai ki te whainga ako rānei?

(How do you know if you have reached the learning goal?)

He aha ngā rautaki e mahia e koe mō te tuhituhi pai?

(What strategies do you use to write well?)

He aha ngā rauemi hei tautoko i tō mahi tuhituhi?

(What are the resources that you use to help you improve your writing?)

He aha ētahi atu kōrero e pā ana ki tō ako i te tuhituhi?

(What can you tell me about how you learn to write?)

He whakaaro anō tau e pā ana ki te mahi tuhituhi i roto i tō akomanga?

(Is there anything else you would like to tell me about the writing programme in your classroom?)

APPENDIX C: Te Anga Putanga Ako (1)

Wāhanga	Taumata 2 P	Taumata 3 P	Taumata 4 P
Whaihua (Audience awareness and purpose)	He tapanga mō taku tuhinga He timatanga iti kei te whakamārama i te kaupapa. He kōwae hei whakaahua i te kaupapa. He whakaaro whānui iti hei whakakapi i te tuhinga pea	He tapanga mō taku tuhinga He kōwae mō te whakamāramatanga i te kaupapa. He whakaaro whānui hei whakakapi i te tuhinga	He tapanga mō taku tuhinga He kōwae mō te whakamāramatanga i te kaupapa. Kua tino whakamaaramatia te kaupapa. He whakaaro whānui hei whakakapi i te tuhinga
Kiko (Content/Ideas)	E rua ngā mōhiotanga kua whakaahuatia i te mahi, āhua, putake, wāhi noho rānei o te kaupapa matua. He nui pea ngā kōrero kāore e pā ana ki te kaupapa.	Nui atu i te rua ngā kōwae hei whakaahua i te kaupapa. Nui atu i te rua ngā mōhiotanga kua whakaahuatia i te mahi, āhua, putake, wāhi noho rānei o te kaupapa matua.	He maha ngā kōwae hei whakaahua i te kaupapa. He mohiotanga kua whakaahuatia i te nuinga o ngā wāhanaga e pā ana ki te kaupapa, ko te mahi, te āhua, te putake, wāhi noho, kare o roto rānei. Kua tapiri atu au i etahi mohiotanga hei tautoko i te kaupapa matua o ia kōwae Kāore ngā kōrero kāore e pā ana ki te kaupapa.
Hanganga (Structure/ Organisation)	Kua timata ki te tuhi mā tētahi anga. Kua whakarooopu ētahi whakaaro. Ko te nui o ngā rerenga kōrero kāore anō kua honotia (linked) ki te kaupapa Kua tarai pea au ki te whakawehe i ngā whakaaro hei kōwae.	Kua mahia tētahi mahere hei anga mō te tuhinga. Kua timata te whakarooopu ētahi whakaaro hei kōwae. Ko te nui o ngā rerenga kōrero kua honotia (linked) ki te kaupapa. Etahi momo timatanga rerenga. Kua hāngai ororau ngā whakaaro, kōwae rānei ki te anga mahere	Kua mahia tētahi mahere hei anga mō te tuhinga. Kua whakarooopungia ngā whakaaro hei kōwae. Ko te katoa o ngā rerenga kōrero kua honotia ki te kaupapa Ētahi momo timatanga rerenga Kua raupapa ororau ngā kōwae , ngā whakaaro rānei.
Mātauranga Reo (Language Knowledge/ Resources)	Ruarua noiho te reo ā-kaupapa/kupu ingoa me te kupu āhua Ko te nuinga he rerenga māma He kupu e whakaatu ana i aku kare-o-roto me aku whakaaro	Kua timata te tuhi i ngā rerenga māro. Maha ngā reo ā-kaupapa/kupu ingoa me ngā kupu āhua kua tāpiri atu Etahi kupu e whakaatu ana i aku kare-o-roto me aku whakaaro e pā ana ki te kaupapa	Kei te tika te nuinga o ngā rerenga māma. He maha ngā rerenga māro. Maha ngā reo ā-kaupapa/kupu ingoa me ngā kupu āhua kua tāpiri atu. Maha ngā kupu e whakaatu ana i aku kare-o-roto me aku whakaaro e pā ana ki te kaupapa Kua timata au ki te tuhi kiwaha hei whakanui i taku tuhinga.

APPENDIX D: Te Anga Putanga Ako (2)

	Taumata 2	Taumata 3	Taumata 4
Āheinga Reo	<p>1. He tapanga mō taku tuhinga 2 He kōrero timatanga iti kei te whakamārama i te kaupapa. 3. He whakaaro whānui iti hei whakakapi i te tuhinga. 4. Kua raupapa tika ngā whakaaro kia mārama ai ōku whakaaro ki tētahi atu.</p>	<p>1. He tapanga mō taku tuhinga. 2. He kōrero timatanga hei whakamārama i te kaupapa. Kua tuhia ngā pārongo matua. 3. He kōrero hei whakatinana i te kaupapa. 4. He whakaaro whānui hei whakakapi i te tuhinga. 5. Kua raupapa tika ngā whakaaro kia mārama ai ōku whakaaro ki tētahi atu.</p>	<p>1. He tapanga mō taku tuhinga. 2. He kōrero timatanga hei whakamārama i te kaupapa. Kua tuhia ngā pārongo matua. 3. He kōrero nui ngā pārongo hei whakatinana i te kaupapa. 4. He whakaaro whānui hei whakakapi i te tuhinga. 5. Kua raupapa tika ngā whakaaro kia mārama ai ōku whakaaro ki tētahi atu.</p>
Puna Reo	<p>1. I roto i taku tuhinga he kupu hei whakaatu i ngā kare-o-roto o ngā kiripuaki. 2. I roto i taku tuhinga ētahi kupu e hāngai ana ki te kaupapa. 3. Kua whakamahi tika au i te irakati me te pūmatua, te tohu pātai me te tohu hā. 4. Kua tuhia e au ētahi momo timatanga rerenga. 5. Kua whakaraupapa arorau ngā rērenga. 6. Kua tuhia ētahi o ngā āhuatanga e hāngai ana ki te putake tuhituhi. 7. Kua tuhia e au ētahi rerenga māro.</p>	<p>1. I roto i taku tuhinga he kupu hei whakaatu i ngā kare-o roto o ngā kiripuaki. 2. I roto i taku tuhinga he kupu hei whakaahua i ngā mahi, ngā wāhi, ngā mea rānei. 3. Kua mahi tika au i te tohu tō, te piko, ngā tohu kōrero, ngā tohumatā rānei. 4. He nui ngā momo timatatanga rerenga. 5. Kua raupapa aku whakaaro ki te kōwae. 6. He whakaaro matua me he whakaaro tautoko mō ia kōwae. 7. Kua whakamahi au i ngā kupu mahi hāngū. 8. Kua timata au ki te mahi i ētahi āhuatanga reo hei whakanikoniko i aku whakaaro pērā i te reo whakaahua, te tāruarua, me te haurite.</p>	<p>1. I roto i taku tuhinga he kupu, he kōrero rānei hei whakaatu i ngā kare-o roto o ngā kiripuaki. 2. I roto i taku tuhinga he kōrero hei whakaahua i ngā mahi, ngā wāhi, ngā mea rānei. 3. Kua mahi tika au i te tohu tō, te piko, ngā tohu kōrero, ngā tohumatā rānei. 4. He nui ngā momo timatatanga rerenga. 5. Kua raupapa tika aku whakaaro ki te kōwae. 6. He whakaaro matua me ētahi whakaaro tautoko mo ia kōwae. 7. Kua whakamahi tika au i ngā kupu mahi hāngū. 8. Kua timata au ki te mahi i ētahi āhuatanga reo hei whakanikoniko i aku whakaaro pērā i te reo whakaahua, te tāruarua, te kiwaha, me te haurite.</p>
Rautaki Reo	<p>1. Kua whakamahi au i tētahi o ngā anga whakamāhere. 2. Kua arotake, kua whakatika au i taku tuhinga kia mārama ake te tuhinga 3. Kua matapaki au i taku tuhinga ki tētahi atu 4. Kua whai wāhi au ki te mahi i ētahi o ngā mahi hei whakaputa i taku tuhinga.</p>	<p>1. Kua rapu, kua arotake hoki au i ngā rauemi hei tuatohu i ngā pārongo me ngā whakaaro e hiahia ana au. 2. Kua whakaraupapa au i ngā pārongo me ngā whakaaro ki tētahi māhere e hāngai ana ki te anga o te momo tuhinga. 3. Kā taea e au te arohaehae i aku tuhinga kia tautohu me te matapaki i ngā āhuatanga reo e hāngai ana ki te momo tuhinga.</p>	<p>1. Kua rapu, kua arotake hoki au i ngā rauemi hei tuatohu i ngā pārongo me ngā whakaaro e hiahia ana au. 2. Kua whakaraupapa au i ngā pārongo me ngā whakaaro ki tētahi māhere e hāngai ana ki te anga o te momo tuhinga. 3. Kā taea e au te arohaehae i aku tuhinga kia tautohu me te matapaki i ngā āhuatanga reo e hāngai ana ki te momo tuhinga</p>

Ngā Kiripuaki

1. Kōwhiria kia rua ngā kiripuaki.
2. Kōwhiria kotahi te kōrero e whakaahua ana i te āhua o ia kiripuaki.
3. Kōwhiria kotahi te kōrero e whakaahua ana i ngā kare o roto o ia kiripuaki.
4. E rite ana tētahi o ēnei kiripuaki ki tētahi tangata e mōhiotia ana e koe?
5. Matapakihia ō whakaaro ki tō roopu pānui



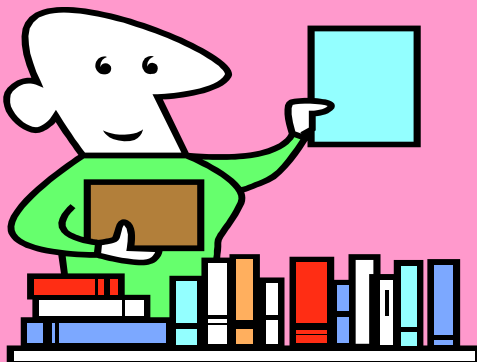
Āheinga Reo

1. Ki ō whakaaro he aha te momo tuhinga?
3. He aha te putake o tēnei tuhinga?
2. He aha ētahi āhuetanga o te tuhinga e tohu ana i te momo tuhinga.
4. He tuhinga anō e mōhiotia ana e koe e pēnei ana te momo, te kaupapa rānei?
5. Matapakihia ō whakaaro ki tō roopu pānui.



Rautaki Reo

1. Ki ō whakaaro he aha te putake ō tēnei tuhinga?
2. He aha ngā pārongo/whakaaro matua ō tēnei tuhinga?
3. Kōwhiria kia rua ngā kupu hōu. He aha te rautaki i mahia e koe kia whai māramatanga.
4. Whakawhitia i ō wheako ake ki tētahi pārongo hōu i roto i te tuhinga.
5. Whakaritea ō pārongo kia matapaki ai ki tō roopu.



Puna Reo

1. Kōwhiria kia rua ngā momo timatatanga rerenga hou.
2. Kōwhiria tētahi kupu mahi hāngū.
3. Kōwhiria kia rua ngā rerenga mārō.
4. Kōwhiria tētahi kwaha hei whakamārama ki tou roopu.
5. Whakaritea ou pārongo kia matapaki ai ki tou roopu.



Te Kai Whakahaere Matapaki

Ētahi pātai hei timatanga,
whakahaere hoki i te matapaki.

1. Ki ōu whakaaro he aha te putake o tēnei tuhinga?
2. Kōrero mai mo te momo tuhinga? He aha ngā āhuatanga e hāngai ana ki te momo tuhinga?
3. He kōrero tā koutou hei whakamārama i ētahi āhuatanga reo?
4. He kōrero e pā ana ki ngā kiripuaki (tuakiri)?
5. He aha ngā pārongo/whakaaro matua?
6. He aha ētahi kōrero tautoko i ngā āria matua?



Puna Reo

1. Kōwhiria tētahi korero e whakaahua ana i tētahi mea, mahi ranei.
2. Kōwhiria tētahi āhuatanga reo e pai ana ki a koe.
3. Kōwhiria tētahi whakaaro matua me ngā whakaaro tautoko e pai ana ki a koe. He aha te take e pai ana tēnei wāhanga ki a koe.
4. He reo tō te kaituhi e rereke ana ki tāhau?
5. Whakaritea ou pārongo kia matapaki ai ki tou roopu.



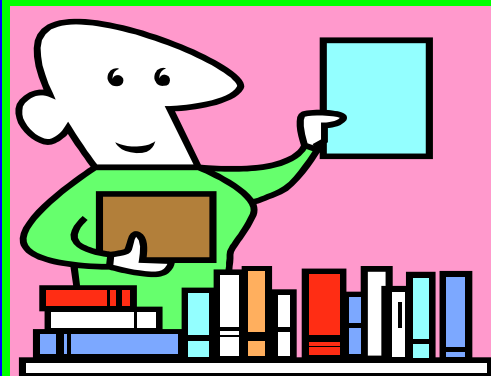
Puna Reo

1. Kōwhiria kia rua ngā momo timatatanga rerenga hou.
2. Kōwhiria kia rua ngā rerenga mārō.
3. Whakaritea ōu pārongo kia matapaki ai ki tou rōpu.



Rautaki Reo

1. Kōwhiria kia rua ngā kupu hōu. He aha te rautaki i mahia e koe kia whai māramatanga.
2. Whakaritea ō pārongo kia matapaki ai ki tō roopu.



Ngā Kiripuaki

1. Ko wai ngā kiripuaki?
2. He kōrero e whakaahua i ngā kiripuaki?
3. He kōrero, whakaahua rānei, e whakaahua ana i ngā kare-o-roto o ngā kiripuaki?
4. Kei te mōhio koe ki tētahi tangata ōrite ki tētahi o ngā kiripuaki?
5. Matapakihia ō whakaaro ki tō roopu pānui.



Āheinga Reo

1. He tuhi paki tēnei, he tuhi pono rānei?
2. He aha te āhuetanga o te tuhi e tohu ana ko tēhea momo tuhi tēnei?
3. Ki ō whakaaro he aha te tino putake o tēnei tuhinga?
4. He tuhinga anō e mōhiohia ana e koe e pēnei ana te kaupapa?
5. Matapakihia ō whakaaro ki tō roopu pānui.



Appendix G: INTERVIEW TRANSCRIPTS (Student 1)

Question 1: Whakamarama mai he aha ngā mahi, ngā ngohe rānei o te hōtaka tuhituhi i roto i tou akomanga?	Wk 1	“Ko te tuhi māhorahora, tuhi a ringa, pānui me te tuhituhi.”
	Week 20	“Aaa..Kei te tuhi mātou mō te blog, me ētahi reta ki ngā tamariki ō tētahi kura i Opotiki. Ētahi wā ka mahi mātou i te anga putanga ako me ngā kāri matapaki, me te tuhi parakatihi...”
Question 2: Tēnā me whakamarama mai, i roto i te mahi tuhituhi kei te ako koe i te aha i tenei wā?	Week 1	“Ki te mōhio ngā tohutohu mō ngā kai me ngā hāngi....me... ngā robots me ngā buildings.”
	Week 20	“Kei te ako au ki te ruapapa tika i aku wkakaaro matua ki te kōwae...umm..me te tuhi tika i ngā piko, ngā tohu kōrero me ngā tohutō ..umm yeah..kei te ako au i ngā whainga ō te taumata toru ō te putanga ako.”
Question 3: Pehea koe e mohio ai he aha te whainga ako mo te whakapai i tou mahi tuhituhi?	Week 1	“Aaa...” (Confused body language. Question was reframed, “Pehea koe e mōhio ai me pehea au e whakatika ai i taku tuhituhi?”) “Ā, ī, aua.”
	Week 20	“Ka titiro au ki te putanga ako kātahi ka titiro ki taku tuhinga..ka mōhio au mēnā kei roto te whainga i taku tuhinga..aaa mehemea kei reira te whainga ka kōwhiri au i tētahi atu whainga”.
Question 4: Pehea koe e mohio ai mena kua oti pai tou mahi tuhituhi?	Wk 1	“Umm, i whakapai atu taku tuhituhi...(pēhea koe e whakapai tō tuhituhi?) aaa... aua.”
	Wee k 20	“Aa..mehemea kua oti pai ki aku tuhinga ka hoatu au i taku tuhinga ki taku hoa ako..umm..ka rapu taku hoa i te whainga i roto i taku tuhinga...aa...kātahi ka whakaatu au i taku tuhinga ki taku pouako...”
Question 5: He aha nga rautaki i mahia e koe mo te tuhituhit pai?	Wk 1	“Ko te mahere, aa, yeah.”
	Week 20	“Aaa ka titiro au ki te anga putanga ako ki te rapu whainga..me..aaa..ētahi wā ka pānui pukapuka au kia tautohu i ngā āhuatanga reo hei tapiri atu ki taku tuhinga...ae.”
Question 6: He aha nga rauemi hei tautoko i tou mahi tuhituhi?	Wk 1	“Te dictionary me ngā pukapuka.”
	Week 20	“Aaa ko te anga putanga ako... me ngā kāri matapaki ...me te thesaurus...me ngā pukapuka i roto i te akomanga me Whaea hoki..umm yea.”
Question 7: He aha etahi atu korero e pa ana ki tou ako i te tuhituhi?	Wk 1	“AUA.”
	Week 20	“Aaa he tino pai au ki te mahi tuhituhi...kei te taumata toru au mō te nuinga ō ngā whainga engari tata tonu au ki te taumata whā...ka taea e au te tuhi ētahi whainga ō te taumata whā...ae..he pai te tuhituhi ki au.”
Question 8: He whakaaro ano tau e pa ana ki te tuhituhi i roto i tou akomanga	Wk 1	“He tino hari ngā mahi o te tuhituhi.” (Clarified that hari was Harikoa).”
	Week 20	“Kei te pirangi au ki te piki ake ki te taumata whā. Mehemea ka piki au ki te taumata wha he tino pai tena..ka whakaritea au mo te Wharekura..ae”

STUDENT 2		
Question 1: Whakamarama mai he aha ngā mahi, ngā ngohe rānei o te hōtaka tuhituhi i roto i tou akomanga?	Week 1	“Kei te ako ahau ki te haere ki te ...next level.”
	Week 20	“Aa ko te tuhi parakatihī me te tuhi mō te blog..mmm..ngā kāri matapaki..aa te mahi i te putanga ako me te arohaehae i a mātou tuhinga..umm..me te tautohu i ngā tuhinga i roto i ngā pukapuka.”
Question 2: Tēnā me whakamarama mai, i roto i te mahi tuhituhi kei te ako koe i te aha i tenei wā?	Wk 1	“Te onomatopae me te homophones me te recounts.”
	Week 20	“Umm, i tānei wā kei te ako au ki te tuhi kupu hei whakaatu i nga kare-o-roto o ngā kiripuaki..aa..me te whakamahi tika i ngā kupu mahi hangū...aaa..me kei te ako au ki te matapaki i nga āhuatanga reo e pā ana ki te momo tuhinga...mmm like...tuhī whakāhua aa..tuhī taki...tuhī paki..ae.”
Question 3: Pehea koe e mohio ai he aha te whainga ako mo te whakapai i tou mahi tuhituhi?	Wk 1	“Kāore au i te mōhio.”
	Week 20	“Hmm, that’s easy...Ka rapu au i tētahi whainga ako i te anga putanga ako...Mmm, that’s it.”
Question 4: Pehea koe e mohio ai mena kua oti pai tou mahi tuhituhi?	Wk 1	“Ka kōrero te kaiako ki au?”
	Week 20	“Ka kōrero tahi māua ko taku hoa tuhi. Ka pānui ia i taku tuhinga kia kite mena kei roto te whianga i te tuhinga. Mehemea ka kite ia i te whainga ka ..aa..ka mahi tick ia i te taha o te whainga.”
Question 5: He aha nga rautaki i mahia e koe mo te tuhituhi pai?	Wk 1	“Ka tuhi pai au.”
	Week 20	“Mm, tuatahi ka tuhi au i tētahi mahere. Ētahi wā ka pānui pukapuka au..aa..ka tautohu au i nga āhuatanga reo i roto i ngā pukapuka kia tuhia ki roto i taku tuhinga...mmm...actually tuatahi ka pānui au i te putanga ako kia kōwhiri i tētahi whainga..ae koina te tuatahi...”
Question 6: He aha nga rauemi hei tautoko i tou mahi tuhituhi?	Wk 1	“Hawhe.” He aha ētahi. “Te a...um.. u.. te ngā kemu mō tuhituhi me ngā flash cards.”
	Week 20	“Aaa te anga putanga ako...te...ngā kāri matapaki...ngā pukapuka...me Whaea me taku hoa ako.”
Question 7: He aha etahi atu korero e pa ana ki tou ako i te tuhituhi?	Wk 1	” Kāore i te mōhio”.
	Week 20	“E tata ana au ki te taumata whā inaianei. Ka taea au te mahi i te nui o ngā whainga o te taumata toru.”
Question 8: He whakaaro ano tau e pa ana ki te tuhituhi i roto i tou akomanga?	Wk 1	“Kao.”
	Week 20	“Kao...he pai au ki te tuhituhi.”

Student 4		
Question 1: Whakamarama mai he aha ngā mahi, ngā ngohe rānei o te hōtaka tuhituhi i roto i tou akomanga?	Week 1	“Ko te tuhi parakatihi, te tuhi mahorahora, me te pānui”
	Week 20	“Ko te tuhi mahorahora, te tuhi parakatihi, te tuhi mō te blog, me te kōrero takirua mō te anga putanga ako”.
Question 2: Tēnā me whakamarama mai, i roto i te mahi tuhituhi kei te ako koe i te aha i tenei wā?	Week 1	“Ko te homophones, ko te punctuation, ko te onematepaea, me te recount, ko te tohutohu...ko ngā instructions”.
	Week 20	Kei te mōhio au ki te ruapapa i aku whakaaro matua ki te kōwae. Inaianei kei tō ako au ki te tuhi i he whakaaro whānui hei whakakapi i taku tuhinga mō aku tuhinga paki. Kei te ako hoki au ki te...te...te tuhi i ngā āhuratanga reo hei whakanikoniko i aku whakaaro perā i te reo whakāhua me te haurite.
Question 3: Pehea koe e mohio ai he aha te whainga ako mo te whakapai i tou mahi tuhituhi?	Week 1	“Punctuation me te dictionary”.
	Week 20	Ka kōwhiri au i aku whainga i te anga putanga ako. Kei te pirangi au ki te piki ake ki te taumata wha.
Question 4: Pehea koe e mohio ai mena kua oti pai tou mahi tuhituhi.	Week 1	“Kāore au i te mohio”.
	Week 20	Ka rapu au i te whainga i roto i taku tuhinga..aa..ka whakaatu au i taku tuhinga ki a Whaea me taku hoa ako mehemea kua oti pai ka ki mai raua kei te tika au.
Question 5: He aha nga rautaki i mahia e koe mo te tuhituhit pai?	Wk 1	“Te brainstorm”
	Week 20	“aaa ka mahi māhere au i te timatanga kia mohio au he aha ngā āhuratanga reo me ngā whakaaro matua....mmm...ka rapu au i ētahi rauemi hei tautoko i ahau”.
Question 6: He aha nga rauemi hei tautoko i tou mahi tuhituhi?	Wk 1	“Ko te Māori thesaurus i te akomanga”
	Week 20	“Ko te anga putanga ako me ngā pukapuka me ngā kāri matapakī”
Question 7: He aha etahi atu korero e pa ana ki tou ako i te tuhituhi?	Wk 1	“Kāore au i te mōhio”
	Week 20	“Kei te taumata toru au engari tata ana au ki te taumata whā, ahakoa he tau rima au ka taea e au te piki ake ki te taumata whā ko tera taku ummm taku goal...ae ki te piki ake ki te taumata wha”.
Question 8: He whakaaro ano tau e pa ana ki te tuhituhi i roto i tou akomanga	Wk 1	“Kao”.
	Week 20	“Aaa... he pai te mahi tuhituhi i roto i taku akomanga”.

