

**RESTORING MĀORI LITERACY  
NARRATIVES TO CREATE  
CONTEMPORARY STORIES OF SUCCESS**

**Melissa Derby**

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## **MIHI**

Ko Tākitimu te waka.

Ko Mauao te maunga.

Ko Te Awanui te moana.

Ko Waikareao, ko Kopurererua ngā awa.

Ko Ngāti Ranginui te iwi.

Ko Ngāi Tamarāwaho te hapū.

Tēnā koutou, tēnā koutou, tēnā koutou katoa.

## **ATTESTATION OF AUTHORSHIP**

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the citations), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

The research reported in this thesis has been approved by the University of Canterbury Educational Research Human Ethics Committee.

## ACKNOWLEDGEMENTS

*Scrawled on a notepad while I waited for my bus in Fort Collins, Colorado:*

About ten years ago Nanny Vi said to me  
My dear, you should enrol in a PhD  
Just think of your koroua, the great Maharaia<sup>1</sup>  
Who pushed the bar for our whānau higher and higher  
If he can do it, she said, then so can you<sup>2</sup>  
Don't be scared, my dear, you know what to do  
So with my tupuna beside me I took a deep breath  
Enrolled in a PhD, and watched my social life die a slow death  
I was determined to make my whānau proud  
And the voices of my tūpuna clear and loud  
To be a good role model for my beautiful son  
To give him a glimpse of what can be done  
If you find something you love, work hard, keep trying  
Dig deep, grit your teeth, one day you'll be flying  
To places and lands you never thought possible  
Up mountains, over oceans that didn't seem crossable  
And now here I am with my thesis completed  
Overjoyed and relieved I wasn't defeated  
By methodology, ontology, and phonology  
Epistemology, ideology, and phenomenology  
It's fair to say I'm ologied out  
But I use these words to give an impression of clout  
While never forgetting tōku reo rangatira  
Me ngā whakaaro tino whakahirahira

---

<sup>1</sup> In 1954, Maharaia Winiata graduated from the University of Edinburgh, in Scotland, and was the first Māori to complete a doctoral degree. His PhD thesis was published posthumously by Blackwood and Janet Paul in 1967 as *The Changing Role of the Leader in Māori Society*. At the time, it was one of the few published academic works by a Māori about 20<sup>th</sup> century Māori. What an incredible role model to have had.

<sup>2</sup> Your words became my mantra, Nanny Vi. Thank you for the gift. I love you, and miss you so very much.

Te tika, te pono me te aroha  
Kia mau ki ēnei kaupapa  
So here is my thesis finished at last  
A story about literacy, which draws from our past  
A celebration of Indigenous excellence  
That shares some ideas for all our descendants  
About human rights and self-determination  
And narratives of success in our great Māori nation  
I want to acknowledge all of my tūpuna  
I am because they were, and because I am they are  
A huge shout out to my cheerleaders<sup>3</sup> – there are many  
Ehara taku toa i te toa takitahi engari he toa takitini<sup>4</sup>  
The participants<sup>5</sup>, my supervisors<sup>6</sup>, my friends<sup>7</sup>, and whānau<sup>8</sup>  
I am eternally grateful, more than you'll ever know  
Thank you to my Dad for having such high expectations  
For teaching me the value of hard work and a good education  
To my wonderful Mum where on earth do I start?  
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For everything you've done and continue to do  
For being there no matter what – and for Awa too  
A special mention must go to a very dear friend  
For whom my admiration and gratitude have no end  
Thank you for encouraging me to push each boundary

---

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<sup>7</sup> How lucky I am to have such wonderful, supportive, caring friends, all of whom keep me sane (relatively speaking). Lots and lots and lots of love!

<sup>8</sup> My parents, my son, my aunties, uncles, cousins, nieces, and nephews – I love my whānau with all my heart.

And for always employing such brutal honesty  
You are brilliant and remarkable – a true rarity  
And our friendship means the world to me  
And now it gives me the greatest of pleasure  
To dedicate my doctorate to my most precious treasure  
My darling son, Te Awanui, this is all for you  
Remember there are no limits to the things you can do  
Work hard, use your manners, and always be kind  
And wherever you go please keep in mind  
That I love you, my boy, more than words can say  
And, on that note, I bid you all a good day!

## **ABSTRACT**

*Ko te kai a te rangatira, he kōrero*

*Discussion is the food of chiefs*

It is generally accepted among scholars and educators that literacy is critical to positive educational experiences and outcomes. The United Nations Educational, Scientific and Cultural Organisation (UNESCO) defines education as a fundamental human right intrinsically important for human development and wellbeing, and for its part, literacy is viewed as a central component of education that provides a foundation for lifelong learning. For these reasons, among others, literacy is a pivotal contributor to fostering self-determination, which is the overarching theme of this study. There is a consensus among educators that literacy is essential to social and human development in its ability to transform lives. Indeed, ensuring basic literacy skills for all is a central goal of every national education system in the world. In New Zealand, research on aspects of literacy has been conducted primarily in monolingual English medium classrooms, or, to a lesser extent, in te reo Māori (the Māori language) immersion settings. Little, however, is known about literacy in home environments where children are exposed to English and te reo Māori.

The purpose of this research is to examine literacy with bilingual four-year-old children attending a dual language (te reo Māori and English) early childhood centre in Christchurch, New Zealand. It focuses specifically on two key sets of cognitive skills, which are widely recognised as playing a critical role in children's emerging literacy, namely phonological awareness, which can be broadly defined as an awareness of the sound structure of spoken words; and key aspects of oral language, including vocabulary knowledge, and story comprehension and retell skills. More explicitly, by replicating eight case studies, the research seeks to determine the efficacy of a home-based intervention involving rich reading and reminiscing (RRR), and stimulating sound sensitivity (SSS), on children's literacy outcomes. In keeping with a general Māori worldview, as well as theoretical contentions put forward in this work, this research takes a holistic view, and also examines the role of whānau, and in particular, mothers, in children's literacy acquisition.

The study draws from He Awa Whiria (A Braided Rivers) model, which is an innovative approach that draws inspiration from both Māori and Western streams of knowledge and practices. Māori epistemology, history, and pedagogical approaches and practices have a salient and natural presence in this study, which, when braided with research that has emerged from Western scholarship, results in the creation of outcomes more powerful than either body of knowledge is able to elicit on their own. In considering the unique environment of the dual language early childhood centre, as well as the exposure of the children participating in this study to both English and te reo Māori in their home environments, attention is also given to the implications of bilingualism on children's emerging literacy. Due to the relatively small cohort of children participating in this research, which totalled eight children and their whānau, a single case design is employed in this study, where each child and their whānau is seen as a unique case study in its own right. Repeated measures of each assessment were taken pre-, mid-, and post-intervention, as well as six months after the intervention finished. A crossover design was established in this work, where four children and their whānau participated in the RRR component of the intervention, which ran for six weeks, followed by the SSS portion of the intervention. The remaining four children participated in the same parts of the intervention but in the reverse order of delivery. This approach established a control in the study, and allowed the effects of each part of the intervention on the children's early literacy skills to be more clearly revealed.

Three key series of data are reported on in this thesis. The first sets, presented in Chapter Four, explored the influence of the home literacy environment, and whānau literacy practices, on children's literacy acquisition, as well as the effects of the intervention on the literacy environment and practices. The results demonstrated that whānau have a significant influence on children's foundational literacy skills, and that the intervention was effective in creating positive shifts in whānau literacy practices, and the home literacy environment in general. The second series of data, reported on in Chapter Five, was generated by the phonological awareness assessment tasks the children completed in both English and te reo Māori pre-, mid-, and post-intervention, as well as six months after the intervention ceased. A two standard deviation band method was utilised in order to statistically validate the data. The findings indicate that the intervention had a substantial effect on the phonological awareness skills of the children participating in this study, specifically on their ability to identify the first phoneme in English and te reo Māori words, and

their skills in detecting the number of syllables in English and te reo Māori test items. The vast majority of the results for each child were significantly different to the average score established pre-intervention, according to the two standard deviation band method.

The final sets of data were presented in Chapter Six, and illustrate the findings of the Picture Naming Task, as well as the story comprehension task and story retell assessments, both of which involved two books – one in English, and one in te reo Māori. The results of the Picture Naming Task, which combined both English and te reo Māori test items, indicate that the strategy trialled in the intervention in order to determine its efficacy in growing children’s vocabulary knowledge, was successful in assisting children to learn new words. In addition to this, the story comprehension skills, particularly in English, of the majority of children improved as the intervention progressed. Some improvements were evident in the te reo Māori story comprehension results for most of the children, although the gains made on this task were not as substantial as those made in the English assessment. These findings are an indication of the dominance of the English language for each child participating in this research. Illustrating this dominance further are the results of the story retell task in te reo Māori, where the researcher was unable to obtain an oral language sample of the children telling the story in te reo Māori. However, they could answer the comprehension questions in English, which indicates they could understand the story, despite their inability to retell it in te reo Māori. The results from the English story retell assessment are mixed, and few solid conclusions were able to be drawn from these about the efficacy of the intervention in strengthening this particular skill. However, it is possible that running the intervention for a longer period of time would reveal the effect of the intervention in creating positive shifts in the children’s ability.

The findings from the various series of data reported in this thesis, interpreted through both statistical and sociocultural lenses, overwhelmingly indicate that the intervention trialled in this work had a substantial effect on the phonological awareness skills, and aspects of oral language proficiency, of the children participating in this study. Furthermore, the findings demonstrate that the intervention was successful in generating positive shifts in the home literacy environments and whānau literacy practices, both of which, it was revealed, have an impact on children’s foundational literacy skills. It was stated at the outset that literacy is a fundamental human right, critical to accessing other human rights, and a key contributor to self-determination. Therefore, the overarching contention put

forward in this work is that the intervention strengthens the emerging literacy of preschool children exposed to English and te reo Māori, and in turn, fosters an ability to access human rights, and to exercise self-determination. Additionally, this study illustrates that aspects of Māori history, epistemology, and traditional pedagogical approaches and practices can be utilised in contemporary whānau settings to support the foundational literacy skills of preschool Māori children.

## **PUBLICATIONS ARISING FROM THIS THESIS**

Derby, M. (2018). 'H' is for Human Right: An Exploration of Literacy as a Key Contributor to Indigenous Self-Determination. *Kairaranga*, 19(2), 45-52.

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Gillon, G., Macfarlane, A., **Derby, M.** (2016). *Te Reo Māori Phonological Awareness Assessment*. Presentation at the 7<sup>th</sup> Biennial International Indigenous Research Conference, Ngā Pae o te Māramatanga, Auckland, New Zealand, 17 November.

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## **CHAPTER ONE: INTRODUCTION**

### **1.1 Positioning the Research**

The primary goal of this research is to explore the efficacy of a home-based literacy intervention in advancing preschool children's foundational literacy skills. Factors considered in this thesis include cognitive skills proven critical to early literacy success, specifically phonological awareness and aspects of oral language, literacy practices in the home, bilingualism, Māori oral traditions and pedagogy, and historical experiences of Māori tribal groups with literacy. This work does not involve a large cohort of anonymous participants nor does it focus solely on descriptive statistical analysis as a way to draw meaning from the data. Rather, it combines quantitative and qualitative data sets gathered with eight individual participants and their whānau (family/families), where the study is replicated with each child and their whānau. These sets are viewed and interpreted through sociocultural and ecological lenses, which enable the researcher to make meaning of the quantitative trends and patterns that emerge, and thus to tell a story about each child individually, which is reflective of their unique context and experiences. Additionally, this thesis sits in the broader context of an international human rights framework, where human rights are recognised as providing an agenda for action, and operate as a means for holding governments to account. Essentially, this research argues that literacy is a fundamental human right, intrinsically important for human development, and an essential tool for pursuing other human rights. This study is undertaken with four-year-old Māori preschool children and their whānau, and for this reason, particular emphasis is placed on the role literacy plays as a key contributor to Māori self-determination, which is a central theme in this work. Ultimately, this study seeks to offer an alternative to the deficit<sup>9</sup> theorising and discourse so often associated with Māori learners. Instead, it aims to restore historical literacy narratives and practices associated with hapū (tribe) and iwi (extended tribe) to create contemporary stories of success for Māori learners, and in doing so, provide for fundamental human rights and self-determination, both at an individual and collective level.

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<sup>9</sup> For examples of research that discusses the deficit discourse related to Māori learners, see Hemara, 2000; Mahuika, Berryman, & Bishop, 2011; McCreanor, 2009; McKenzie, 2005; Tunmer, Chapman, & Prochnow, 2002; Westerveld & Gillon, 1999-2000

## 1.2 Definitions of Literacy

As an initial orientation to this thesis, it is necessary to acknowledge the multitude of definitions associated with literacy, and to locate the broad concept of literacy within this study. The word 'literacy' is widely used in contemporary vernacular, and has become somewhat of a colloquial term used to describe competency and understanding in a broad range of fields (Derby, 2018). Examples include 'emotional literacy' (Knight & Modi, 2014), 'financial literacy' (Lusardi, 2015), 'digital literacy' (Koltay, 2011), and 'environmental literacy' (Abiolu & Okere, 2012). These examples demonstrate the semantic elasticity of the term, which is a key feature that may contribute to its widespread use. However, in the context of this study, the following definitions of literacy prevail.

The United Nations Educational, Scientific and Cultural Organisation (UNESCO) (2009), in considering some of their own definitions of literacy, notes that these have evolved over time. For example, in 1958 a person was considered to be literate if they could "with understanding, both read and write a short simple statement on his or her everyday life" (UNESCO, 1958, p. 153). Two decades later, this definition had expanded to include the ability to:

Engage in all those activities in which literacy is required for effective functioning of his or her group and community and also for enabling him or her to continue to use reading, writing and calculation for his or her own and the community's development. (UNESCO, 1978, p. 183)

In 2005, UNESCO defines literacy as:

The ability to identify, understand, interpret, create, communicate and compute using printed and written materials associated with varying contexts. Literacy involves a continuum of learning in enabling individuals to achieve his or her goals, develop his or her knowledge and potential, and participate fully in community and wider society. (p. 154)

UNESCO's evolving ideas acknowledge some key elements related to literacy, which include the ability to use texts competently and with understanding, as well as recognition of the pivotal role literacy plays in fostering an ability to continue to learn, engage, and contribute to diverse and manifold aspects of social, political, and economic life, both at an individual and community level.

Further to this, in a domestic context, Literacy Aotearoa<sup>10</sup> (2015) defines literacy as “Listening, speaking, reading, writing, numeracy and critical thinking, interwoven with the knowledge of social and cultural practices. Literacy empowers people to contribute to and improve society” (p. 18). Similarly, Penetito<sup>11</sup> (2001) contends “Literacy is a means with which to express, understand, provide for, and make sense of oneself and the whole richness of oneself in its widest cultural, spiritual, intellectual and physical sense” (p. 5). According to a report written by the Māori Adult Literacy Working Party (2001), literacy is a pivotal component of nation-building, and when fully realised, it enables people to take part in the fullness of the society in which they live.

This work explores literacy with bilingual Māori children and their whānau, and for this reason, it is necessary to consider some Māori understandings of the concept of literacy. The Māori Adult Literacy Working Party, in exploring the notion of Māori literacy, contends:

Literacy programmes for Māori are not only about reading and writing... though they include this. They are also about outcomes that show that people have increased cultural and political knowledge. As well as knowing how to speak te reo Māori [the Māori language] this includes knowledge about whakapapa, knowledge about who you are and where you come from. (p. 9)

This extract indicates why there is a need to consider definitions of literacy beyond those associated with reading and writing, and particularly, in the context of this study, those definitions that are informed by Māori epistemological perspectives. Romero-Little (2006) points out that literacy is not new to Indigenous communities, and that for centuries these communities have had their own distinct understandings, forms, and processes of literacy which provided children with meaningful opportunities to acquire the cultural and intellectual traditions of their respective communities. Hopa (as cited in Romero-Little, 2006) contends that Indigenous literacies are not confined to the “narrow and decontextualised” view of literacy that is associated with reading and writing. Illustrating this, the following

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<sup>10</sup> Literacy Aotearoa is a national organisation of adult literacy providers, and a leading commentator on literacy issues in New Zealand (retrieved from <http://www.literacy.org.nz/who-we-are>)

<sup>11</sup> Penetito’s statement is recorded in: Māori Adult Literacy Working Party, (2001). *Te kāwai ora: reading the world, reading the word, being the world* (Report to Hon Tariana Turia, Associate Minister of Māori Affairs). Wellington, New Zealand: New Zealand Government.

extract offers some insight into the far-reaching nature of literacy as it is conceived of in Te Ao Māori (the Māori World) and for Māori communities:

Literacy in Māori terms should include the ability to read and write in both Māori and English, i.e biliteracy and be able to use that ability competently, i.e. to be functionally biliterate in Māori and English. Being literate in Māori should also include having the capacity to 'read' the geography of the land, i.e. to be able to name the main land features of one's environment (the mountains, rivers, lakes, creeks, bluffs, valleys etc.), being able to recite one's tribal/hapū boundaries and be able to point them out on a map if not in actuality as well as the key features of adjacent tribal/hapū boundaries and being able to 'read' Māori symbols such as carvings, tukutuku [ornamental lattice work], kōwhaiwhai [painted scroll] and their context within the wharehau [meeting house] (poupou [pillar], heke [rafter] etc.) and the marae [community centre] (ātea [area in front of wharehau], etc.). (Māori Adult Literacy Working Party, 2001, p. 7)

This extract does not stand as the single Māori definition of literacy; Māori ontologies are diverse, and are informed by a multitude of realities of what it means to 'be Māori'. However, what this extract shows is a perspective that differs significantly from Western notions of literacy – a perspective that has integrity in its own right, and one that warrants acknowledgement in research pertaining to literacy in Māori communities.

A detailed analysis of the intricacies of the literacy phenomenon is beyond the scope of this study; however, the aforementioned definitions provide a little insight into the far-reaching and complex nature of literacy, and the influence it has on people's lives. Māori notions of literacy are grounded in a Māori worldview, and require consideration in the context of this research. Finally, for the purposes of this work, which, explores the efficacy of a home-based literacy intervention in advancing preschool children's foundational literacy skills, literacy is taken to mean practices that involve and promote listening, talking, reading, and writing. However, the researcher acknowledges the broad scope of literacy beyond the bounds of dominant Western hegemony, and its salience to cultivating self-determination in the areas of health and wellbeing, community engagement, cultural imperatives, and lifelong learning.

### **1.3 Literacy as a Human Right**

Literacy is essential to social and human development in its ability to transform lives (UNESCO, 2009), and it is generally accepted among scholars and educators that a

high standard of literacy is critical to positive educational experiences and outcomes (Nguyen et al., 2017; Snow & Biancarosa, 2003; Sue & Okazaki, 1990). Indeed, ensuring basic literacy skills for all is a central goal of every national education system in the world (Derby, 2018). Furthermore, UNESCO (2009) contends the development of skilled reading and writing from the outset of formal schooling is critical for achieving life-long academic, vocational, and social success. For this reason, literacy is recognised as a human right, as emphasised by UNESCO (2006), and illustrated by the following extract:

Literacy is a fundamental human right and the foundation for lifelong learning. It is fully essential to social and human development in its ability to transform lives. For individuals, families, and societies alike, it is an instrument of empowerment to improve one's health, one's income, and one's relationship with the world. (p. 137)

In 2003, the UN launched the United Nations Literacy Decade with the slogan 'Literacy is Freedom' to push the social, economic, cultural, and political benefits of literacy (Limage, 2009), which provide the rationale for recognising literacy as a human right. UNESCO (2006) identifies a multitude of interrelated benefits of literacy, which include social advantages, such as better health and education outcomes; economic gains, including the potential to earn a higher income; and political benefits, which foster an ability to participate in local and national politics. The links between literacy and improved social, economic, and political outcomes are well-established (World Literacy Foundation, 2015) but UNESCO (2006) notes that the cultural benefits of literacy are more difficult to quantify. However, Wadham, Pudsey and Boyd (2007) cite some advantages for promoting Indigenous and minority languages in literacy programmes, which include enabling people to connect with and participate in their own culture, and contributing to cultivating positive shifts in attitudes, behavioural patterns, norms, and values in wider society. Romero-Little (2006) adds that Indigenous peoples worldwide are deconstructing dominant Western paradigms and typical constructs of literacy which narrow the concept to reading and writing, and instead, are articulating and constructing their own distinct paradigms based on Indigenous epistemologies (Indigenous ways of knowing), and which are embedded in self-determination and social justice.

Literacy is seen as a pivotal contributor to the quest for self-determination for Indigenous groups (Bialostok & Whitman, 2006; Romero-Little, 2006). Anaya (1993) contends self-determination is a concept rooted in core values of freedom and

equality, and expressly associated with peoples instead of states, thus placing it within the realm of human rights. Anaya also notes that self-determination is often taken to mean a form of separatist government, particularly in the case of Indigenous peoples; however, he argues that self-determination is in fact about meaningful participation “that does not require the assimilation of individuals, as citizens like all others, but the recognition and incorporation of distinct peoples in the fabric of the State, on agreed terms” (p. 87). In addition to being a right guaranteed under Article Two of the Treaty of Waitangi<sup>12</sup> (1840), self-determination is also affirmed in a number of international human rights instruments, including Article Three of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), which states “Indigenous peoples have the right to self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development” (UN General Assembly, 2007). Indeed, self-determination is at the very heart of UNDRIP (Stamatopoulou, 2016), and it is argued that fulfilment of the rights guaranteed in UNDRIP contributes to the self-determination of Indigenous peoples.

The World Literacy Foundation (2015) perceives a correlation between levels of literacy and personal income, health outcomes, trends associated with crime and welfare, educational outcomes, political participation, ability to use digital technologies, engaging in activities that require critical thinking, and intergenerational support, such as an ability to help children with their homework. Therefore, literacy touches, either directly or indirectly, on a large array of the human rights provided for by international human rights instruments. The observations made by the World Literacy Foundation highlight the central role literacy plays in accessing a multitude of human rights, which, in turn, affect self-determination, both at a collective and individual level. However, Bialostok and Whitman (2006) warn of the dangers of activities and processes, which promote literacy for Indigenous communities, that are infused with “liberatory discourses of individuality, freedom, agency, and human rights” (p. 381) but that are, in reality, reconceptualisations of earlier colonial projects which were tacitly designed to undermine Indigenous cultures and epistemologies. Instead, Bialostok and Whitman encourage what Hornberger (1996) calls ‘ground up’ approaches to literacy, which are largely directed by Indigenous communities themselves, and thus contribute to the self-

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<sup>12</sup> For details on the Treaty of Waitangi, see Moon, P. (2002). *The Path to the Treaty of Waitangi: Te Ara ki te Tiriti*. Mangawhai, New Zealand: David Ling Publishing Limited.

determination of Indigenous groups and individuals. Moreover, literacy programmes, which are informed by Indigenous ontologies and knowledge systems, have the potential to act as a vehicle to support the revitalisation of Indigenous epistemologies, pedagogies, and languages, which, in turn, contribute to the self-determination of these groups. In summary, UNESCO (2002) argues “Literacy is not only an indispensable tool for lifelong education and learning but it is also an essential requisite for citizenship and human social development” (p. 2). This statement illustrates why literacy has the status of a human right; however, it is important to ensure literacy interventions are not neo-colonial tools but rather are culturally relevant, informed by Indigenous epistemologies, and support the fulfilment of the rights of Indigenous peoples.

#### **1.4 The Treaty of Waitangi**

This research is conducted in New Zealand, and therefore it is fitting to position this study within the context of the founding document of New Zealand as a nation state, the Treaty of Waitangi. The Treaty formalised the relationship between Māori and the Crown, and established a set of rights and obligations that continue to warrant recognition and fulfilment today. Research in New Zealand, particularly studies that have relevance to or are inclusive of Māori, invariably makes reference to the Treaty, and the need to uphold the rights and obligations it provides for. The Human Rights Commission’s 2009-2010 Statement of Intent notes that “human rights dimensions of the Treaty of Waitangi include both universal human rights and Indigenous rights” (Human Rights Commission, 2018); therefore, this study acknowledges the rights guaranteed to Māori under the Treaty of Waitangi, alongside the provisions of international human rights instruments.

#### **1.5 Justification for the Study**

The National Science Challenge (NSC) A Better Start: E Tipu E Rea<sup>13</sup>, funded by the Ministry of Business, Innovation and Employment (MBIE), has the lofty goal of ensuring “all children are literate, successful at school, and prosperous in adult life” (Cutfield, 2017). In its pursuit of this goal, the NSC is committed to improving childhood literacy, and to contributing to more equitable outcomes in education. The

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<sup>13</sup> For more information on A Better Start: E Tipu e Rea, visit [www.abetterstart.nz](http://www.abetterstart.nz)

NSC, which runs from 2014 to 2024, recognises “our children are our communities’ greatest asset and investment” (Cutfield, 2017), and cites successful learning as being one of three essential factors that supports children in their early years (A Better Start, 2016). Key stakeholders contributing to the NSC identify literacy as crucial to children’s early learning (A Better Start, 2016). Prior to the New Zealand government abolishing National Standards in 2018, one in three children was not meeting the National Standard for reading in their first year of primary school, and one in four was not meeting the National Standard for writing. Māori children are overrepresented in this cohort (Ministry of Education, 2016).

These statistics follow a global trend where research indicates that children who belong to Indigenous or minority groups often do not reach the same standard of literacy compared to children who come from the dominant group within a country’s education system (Haycock, 2001; Hedges & Nowell, 1999; Jeynes, 2007; Johnson, 2004). In New Zealand, various studies continue to report on inequalities in school entry literacy skills, including phonological awareness and aspects of oral language, and subsequent reading and spelling performance between Māori and Pākehā students (Crooks & Flockton, 2005; Gillon & Macfarlane, 2017; Limbrick, 2001; McNaughton, Phillips, & MacDonald, 2003; Tunmer, Chapman, & Prochnow, 2002; Westerveld & Gillon, 1999-2000). Indeed, some studies note that early differences in reading and spelling abilities at school entry level between Māori and Pākehā<sup>14</sup> children persist into the adolescent years, where significantly fewer Māori children achieve the required benchmark for literacy compared to their non-Māori peers (Carson, 2012; Harris, 2007). Francis, Shaywitz, Stuebing, Shaywitz and Fletcher (1996) observe that once a delay in literacy acquisition manifests for a child in primary school, trends suggest that a return to healthy levels of progress is unlikely.

This study strongly rejects the notion of ‘Māori underachievement’, a term which, if analysed with a Māori lens, would have a very different framework for interpreting, understanding, and addressing this notion. Instead, it posits that the education system is lacking in its provision of responsive literacy programmes for Māori children, and that current measures in the system are, in many ways, culturally inappropriate. In this study, the aforementioned trends raise questions about culturally responsive pedagogy and culturally relevant content as pivotal factors in

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<sup>14</sup> The term, ‘Pākehā’, refers to settlers of non-Māori descent, who originated predominantly from Britain, and their present-day descendants (Derby, 2016).

contributing to discrepancies in achievement rates between Māori and non-Māori children (Macfarlane, 2010). With this in mind, and in considering the notion that literacy is a fundamental human right critical to accessing other human rights, it is vital to explore literacy in a Māori context – in this instance, specifically with bilingual children – in an attempt to determine effective strategies which contribute to enhancing early literacy development for Māori children. In light of this, and in recognition of the pivotal role whānau can play in children’s early literacy development (Kusleika, 2014; Reese, 2013; Reese & Neha, 2015; Salmon & Reese, 2016; Weigel, Martin & Bennett, 2005; Wells, 1986), the key research question asked is ‘What effect does a home-based literacy intervention have on the cognitive skills (phonological awareness and elements of oral language) associated with children’s emerging literacy (where the term ‘intervention’ is used not in the sense of relating to need, but rather to bring about specific positive transformations in the experiences and positioning of Māori)?’ A secondary line of enquiry focuses on literacy practices in the home. These questions are mentioned here in brief because key aspects of these lines of enquiry, together with some justification for the research questions, are discussed in detail in Chapters Two and Three of this thesis.

## **1.6 Ethical Considerations**

The researcher lodged a low risk application for ethical approval, and was granted this on 16 December, 2016. The application was deemed to be low risk by the Educational Research Human Ethics Committee because this study is partially covered by the ethics application 2016/21 Gillon. The application was lodged to seek ethical approval to interview whānau, and to add material relating directly to this study (see Appendices 1, 2, 3, and 4). The researcher worked collaboratively with the early childhood centre, which the children involved in the study attend, to produce the information sheets and consent forms used in the study. The participants received information pertaining to the study in te reo Māori and English. Whānau were required to sign a consent form when they agreed to be involved in the study. The Board of Trustees at the early childhood centre was also given the opportunity to contribute to the resources, which were sent to whānau inviting them to participate.

The researcher offered to attend a hui-ā-whānau (school meeting with families), or a forum deemed appropriate by the early childhood centre, to explain the study in

detail, and answer any questions that may arise. The researcher also ensured the adult participants understood they were free to decline to answer questions, and could amend or remove sections from their transcribed interviews. Each participant could also withdraw from the project at any stage without disadvantage. The child participants have been given pseudonyms in order to ensure their anonymity is protected. The audio recordings have been locked in a cabinet with the primary supervisor, and will be destroyed after three years.

The final section in this chapter outlines the architecture of the thesis.

## **1.7 Thesis Structure**

### Chapter Two

This chapter explores literature relating to key considerations in this research, and provides a contextual and conceptual framework from which to establish the direction and focus of the study. Dimensions that relate to this thesis include phonological awareness, and various elements of oral language, as key predictors of literacy success; literacy practices in the home – in particular, the role of the mother in fostering skills in early literacy; bilingualism, and its possible influence on literacy development; Māori oral traditions and pedagogy; and historical interactions of iwi and hapū with literacy. This chapter establishes theoretical perspectives through which the various data sets collected in the study can be viewed, analysed, and interpreted. In addition to this, the culmination of the various factors discussed in this chapter establishes the key research question posed in this study, which is: ‘What effect does a home-based literacy intervention have on the cognitive skills associated with children’s emerging literacy?’ Two secondary considerations are also put forward, specifically, an exploration of the influence of whānau on children’s literacy development, and the effect of the intervention in creating positive shifts in the home literacy environment.

### Chapter Three

Building on the framework established in the previous chapter, Chapter Three outlines the ideological orientations and methodological approaches employed in the research. Two theoretical constructs are analysed – those being sociocultural theory, and ecological systems theory – and the method in which they are applied to the case

study is provided. The four-year-old participants of the study are introduced, and details are specified of the development and implementation of the intervention trialled in this work. This chapter concludes by presenting the various phases of data collection, and outlines the methods employed for analysing the data generated at each stage.

#### Chapter Four

This chapter presents the data sets collected in the study relating to literacy practices in the home environment. More specifically, three particular series of data are discussed. Firstly, the findings of a questionnaire conducted pre- and post-intervention – the questions of which were centred on the home literacy practices of the participants in the study – are illustrated. Secondly, data sets pertaining to whānau engagement with the intervention, together with their evaluation of it, are offered, and finally, analysis of the whānau reading samples collected pre-, mid-, and post-intervention are presented. This chapter has three main functions. Firstly, it examines one of the major considerations of this study – that is, the influence of the home literacy environment on the emerging literacy of the children participating in this research. Secondly, it explores the effects of the intervention in creating positive changes to home literacy practices, and finally, it establishes a contextual lens through which to view and interpret the data sets presented in Chapters Five and Six of this work. Therefore, when considered alongside the findings related to other dimensions explored in this work, the data sets presented in this chapter provide insights into key influences on the emerging literacy skills of the children who participated in the study.

#### Chapter Five

This chapter presents the findings of the assessment tasks the children completed relating to phonological awareness, which is generally recognised as being one of two key predictors of early literacy success. The findings of game-based assessment tasks, which the children completed pre-, mid-, and post-intervention, and six months after the intervention ceased, are examined, and the lens constructed in Chapter Four of this work is utilised in this chapter to generate some analysis of the phonological awareness data sets. Chapter Five contributes to answering the key

research question posed in this thesis by shedding light on the efficacy of the intervention in generating change in the phonological awareness skills of the children participating in this research.

### Chapter Six

Following on from the data sets presented in Chapter Five, this chapter examines further key predictors of early literacy success, specifically various elements of oral language, such as vocabulary knowledge, and story comprehension and retell skills. The contextual construct constructed in Chapter Four, and applied in Chapter Five, is used to shed some light on data relating to the oral language skills of the children participating in this study. Together with data on phonological awareness, data sets on aspects of oral language were collected pre-, mid-, and post-intervention, and six months after the intervention finished. The major focus of this chapter, and the contribution it makes to the thesis overall, is to determine the effectiveness of the intervention in creating positive shifts in elements of the oral language skills of the children participating in this research.

### Chapter Seven

This chapter analyses the findings of Chapters Four, Five, and Six, and draws from these data sets as they are viewed and interpreted through the theoretical perspectives outlined in Chapters Two and Three, to generate a discussion on the efficacy of the intervention in strengthening the cognitive skills associated with the early literacy of the children participating in this research. Essentially, Chapter Seven seeks to provide answers to the key research question: ‘What effect does a home-based literacy intervention have on the cognitive skills associated with children’s emerging literacy?’ as well as the secondary line of enquiry, which explored whānau literacy practices, and the influence of the intervention on the home literacy environment.

### Chapter Eight

The final chapter in this work concludes the thesis, and relates the findings of Chapters Four, Five, and Six, together with the discussion that unfolded in Chapter

Seven, to the framework detailed in Chapter One of this work, specifically the assertion that literacy is a human right, which plays a central role in fostering individual and collective self-determination for Indigenous peoples. This chapter also details the contribution this work makes to the body of knowledge associated with research on literacy, and Māori learners and their whānau. Chapter Eight finishes by offering recommendations for further research in this field.

## **CHAPTER TWO: LITERATURE REVIEW**

The overarching purpose of Chapter Two is to explore literature relating to central aspects of this research. In the preceding chapter, the intention of this thesis was outlined in general terms. Consideration was given to various definitions of literacy, and following this, the notion of literacy as a human right, and a key contributor to self-determination, was discussed. This work was positioned in the context of the Treaty of Waitangi, and the contribution this thesis makes to A Better Start National Science Challenge was acknowledged. The previous chapter concluded with an outline of the structure of the remainder of the thesis. The objective of Chapter One was to outline the overall architecture of this work, and to establish an overarching framework in which the study is located, specifically, one of human rights. Chapter Two builds on the framework established in the previous chapter with an exploration and analysis of discourses pertaining to key considerations in this research. The intention of this analysis is to provide a conceptual lens through which the data sets generated in this work can be viewed and interpreted. Furthermore, aspects of this review attempt to generate some contextual understanding of this study, particularly with regard to historical considerations, and the manner in which these considerations contribute to the overarching theme of this work, specifically self-determination.

In order to enable an exploration of literacy as it emerges with the participants in this study, there are a number of dimensions that require investigation. These include oral traditions in pre-European tribal societies (where the term, 'Māori' as it is understood in contemporary times did not come into existence until after the arrival of Pākehā settlers); the experiences of Māori with literacy following the introduction of the concept of the written word by predominantly missionary groups; phonological awareness, and key aspects of oral language; literacy practices in the home – in particular, the influence of mothers in the development of skills associated with literacy; and bilingualism. Therefore, by examining the aforementioned aspects, a framework is constructed through which to advance some understanding of the emerging literacy of the children participating in this study. This literature review is comprised of three sections. Section one examines oral traditions in Te Ao Māori, and provides some historical analysis of Māori interactions with literacy, specifically how this phenomenon impacted on Māori societies and te reo Māori. Section two focuses on phonological awareness and elements of oral language as key cognitive skills

critical for early literacy success, and also gives attention to bilingualism. Finally, section three addresses whānau involvement in children's emerging literacy, in particular, the practices of shared book reading, conversations, and storytelling. This section also considers the influence mothers may have on the literacy development of their child. Interwoven throughout the sections in this chapter is acknowledgement of the various strands that tie elements of aspects of this literature review to the main theme of this study, namely self-determination.

## **2.1 Māori Oral Traditions and Language**

This section investigates literacy in Te Ao Māori, and with the aim of providing a holistic view of this concept, it is pertinent to consider how literacy – in this instance, taken to mean ‘the written word’ – affected Te Ao Māori. Therefore, in order to locate a starting point that reveals any subsequent changes in Te Ao Māori, it is necessary to examine aspects of that environment before literacy arrived in New Zealand. This starting point acts as a base classification from which an understanding of the impact of literacy on Māori societies may be revealed. Prior to the arrival of Pākehā in New Zealand, Te Ao Māori was an entirely oral society (Royal, 2005) where knowledge, customs, and history were transmitted from generation to generation in oral form (Mahuika, 2012). Vansina (1985) argues that oral traditions “contain the sum total of past human experience and explain the how and why of present day conditions” (p. xi). In Te Ao Māori, oral traditions have long provided substance to and foundations for Māori history, and have acted both as a knowledge repository as well as a vehicle for intergenerational knowledge transfer (Derby, 2016). Royal (2002) notes there is often an assumption made that oral traditions are solely concerned with storing large quantities of knowledge. However, he contends that keepers of oral traditions were also required to understand, analyse, apply, and critique these bodies of knowledge in a vast range of contexts. Royal (2005) captures the significance of oral traditions to Te Ao Māori, noting that everything needed to maintain Māori society “was contained in oral histories and traditions” (p. 16), and Mahuika (2012) adds that for Māori, oral traditions were critical to understanding the past, present, and future.

Moon (2016) explains that the oral nature of Māori society had profound cultural and social implications not only for how knowledge was transmitted and stored, but for who in Māori communities took on the role of keeping and passing knowledge from

one generation to the next. Traditional Māori society was organised by a strata of tribal structures, those being whānau, hapū and iwi (Barlow, 1991; Maaka, 1994; Winiata, 1967). Whānau were the smallest of these three kin groups, and were comprised of three or four generations numbering as many as 30 people in total (Bourassa & Strong, 2002). The whānau was the basic social unit in traditional Māori society and its main function was the procreation and nurture of children (Walker, 1990). Metge (1976) observes that children received their early education within the confines of the whānau, where they learnt genealogies, tribal history, customs, and good language and behaviour through the media of song and storytelling. The wider whānau unit played an integral part in the education of children by identifying particular skills and aptitude, and fostering the growth and development of these skills by encouraging children to learn through play, and mimicking elders (Mead, 2003). A network of familial support developed around children, and the responsibility for nurturing skills, and fostering the acquisition of knowledge in children was shared amongst the wider whānau unit (Adds, Hall, Higgins, & Higgins, 2011).

Metge (1976) observes that as children grew older, they spent more time assisting their parents, and developing the skills and rites associated with their gender. Regular practice of various skills, and exposure to knowledge associated with those skills, was a key learning approach in traditional tribal contexts (Adds et al., 2011). Elders would compose waiata (songs or chants) to recall historical figures and events, or to honour traditional beliefs and allegiances, and would recite them within earshot of the children (Buck, 1982). A select few, who proved to have retentive memories, were sent to a whare wānanga (school of learning) where the primary objective was to pass on traditional knowledge from one generation to the next. One prominent tradition, for instance, was the acquisition of knowledge relating to whakapapa (genealogy), where typically, those selected tribal members were entrusted with the responsibility to learn, retain, and transmit knowledge about familial lines of descent through recitation with elders (Metge, 1995). Like the early education children received within the whānau unit, whare wānanga had their own distinctive pedagogical approaches and practices (Best, 1934; Mitira, 1972). Children who attended whare wānanga memorised significant quantities of historical and cultural material primarily through learning songs and chants (Buck, 1982). One particular pedagogical approach used to support the acquisition of dense or esoteric content was to conduct lessons late at night when it was dark. This practice ensured daytime

distractions were minimised, and allowed learners to concentrate on the task at hand (Add et al., 2011).

Given the entirely oral nature of traditional Māori society, memorising, retaining, and transmitting vast quantities of knowledge was crucial in ensuring the maintenance of this knowledge, which was critical in safeguarding the identity and survival of the group (Add et al., 2011). Accuracy was paramount, and Metge (1976) notes that this knowledge was indeed passed on unchanged – that to alter or question the knowledge was an affront to Tāne, the god who obtained the knowledge for humankind. The oral tradition that tells of Tāne’s quest to gain the knowledge, together with its resonance with this study, is explained in more detail in Chapter Three of this work. On the importance of passing the knowledge on unchanged, Pere (1990) observes:

Our repositories are the people that we cling to; there is no deviation; whatever they’ve said, their word has been transmitted down to us. This is because our repositories have not only been trained, skilled, rote-learned, whatever we might like to call it. But they have also taken on board a very sacred mission of transmitting information. (p. 2)

This extract illustrates the salience given to oral traditions as being more than simply a means for storing and transmitting knowledge but as having connections with – and indeed, their very origins in – the realms of the gods. Māori oral traditions inspired the development of the literacy intervention trialled in this work, and the activities whānau undertook during its course. This is discussed in detail in the Chapter Three of this thesis.

Aspects of Māori oral traditions are evident in contemporary times, and include whaikōrero (formal oratory), karanga (welcome call), mōteatea (traditional chant), haka (war chant), waiata ringa (action song), karakia (incantation or prayer), whakataukī (proverb), and the telling of pūrakau (stories or legends), and creation narratives (Rewi, 2010). Additionally, like the children who attended whare wānanga in traditional times to acquire knowledge of whakapapa, Reese, Hayne and MacDonald (2008) observe that Māori whānau continue to practice a variant of this oral tradition with their children in the form of mihimihi (shorter speeches on one’s whānau and tribal connections). Moreover, Reese and Neha (2015) acknowledge the importance of talking about the past in Māori culture, and note that it remains a highly elaborated activity among young and old. Conversations about the past manifest through the remnants of Māori oral traditions that continue to be practiced

in modern times, and this relatively constant reference to the past is a key feature of the intervention, discussed in Chapter Three of this thesis.

Similar to the connections oral traditions are said to have with the spiritual world, te reo Māori, which Moon (2016) notes was not simply the dominant language in traditional Māori society, but was, in fact, the only language for Māori, also has connections with the metaphysical realm. Rangihau (as cited in Browne, 2005, p. 4) contends te reo Māori is “a reo wairua, a spiritual language”. Likewise, in the evidence he provided to the Waitangi Tribunal for its 1986 report on the te reo Māori claim, Sir James Henare (1986) notes:

The language is the core of our Māori culture and mana. Ko te reo te mauri o te mana Māori (The language is the life force of the mana Māori). If the language dies, as some predict, what do we have left to us? (p. 34)

What is noticeable from this extract is the reference to te reo Māori being more than simply a means of communication to an entity in possession of its own mauri – or life force. Moon (2016) argues that “the conventional notion of ‘language’ as a functional means of communication has some limitations when it comes to describing te reo” (p. 17), and Thiong'o (1986) captures this notion with his statement:

Language as communication and as culture are... products of each other. Communication creates culture: culture is a means of communication. Language carries culture, and culture carries the entire body of values by which we come to perceive ourselves and our place in the world. (p. 15-16)

Te reo Māori also provides insight into Māori culture and epistemology (Mikaere, 2011). The way in which people communicate, and the words they attach to values, concepts, objects, feelings, and actions reflect their unique worldview (Derby, 2016). The value of te reo Māori, therefore, extends beyond that of a tool for practical communication to that of a vehicle to express a culture and worldview. Royal (1998) adds that te reo Māori not only acts as the medium by which the culture is transmitted, it also carries the mauri of the people to whom the language belongs, thus creating a symbiotic relationship between the speaker and the spoken word. Moon (2016) adds that because te reo Māori has a mauri of its own, individuals can connect to it with their own mauri, thereby creating an interdependent relationship where each contributes to the mauri of the other.

While an intricate exploration of te reo Māori is beyond the scope of this work, it is important to acknowledge the language for three reasons. Firstly, in a study exploring literacy with Māori children, it is appropriate to recognise the inextricable link numerous scholars contend language has with culture and identity (Durie, 1995; Houkamau & Sibley, 2010; Karetu, 1993; Pere, 1988, Thiong'o, 1986; Ward, 1999). In other words, it would be remiss not to ensure cognisance of te reo Māori in work that considers cultural context, in particular, as a factor that could influence the outcomes of the study. Secondly, this research explores literacy in both English and te reo Māori, so for this reason, some consideration of te reo Māori is warranted, and finally, the intervention trialled in this study uses both English and te reo Māori in its delivery.

In summary, Māori oral traditions and language evolved over centuries in an autonomous environment that was exclusively Māori, devoid of contact with any other notion of storing, communicating, and transmitting knowledge, culture, and language. Tribal groups had absolute authority as self-determining entities. The impressiveness of Māori oral traditions was observed by Harding (1892), a typographer and historian of printing, who contended that Māori oral traditions were “paralleled by the classic traditions of civilised Greece and Rome” (p. 42), and that criticism which rejects Māori oral traditions as historically dubious and scientifically worthless “must, to be consistent, pass a similar verdict on the “Iliad” and the “Odyssey”” (p. 42). The prominence of oral traditions, and the ubiquitous nature of te reo Māori in Māori society, are important considerations when examining literacy in Māori contexts – in both traditional and contemporary times. Furthermore, it has been mentioned that aspects associated with oral traditions informed the development of the literacy intervention trialled in this study, and these activities are supported by resources written, and practices conducted, in te reo Māori. Ultimately, this section constructs a baseline against which to measure changes in Māori society following the arrival of the written word in New Zealand. It also establishes a contextual lens through which elements of the intervention trialled in this work can be understood. The following section explores the historical impact of literacy, and its implications in Māori society.

## **2.2 The Arrival of the Written Word in New Zealand**

Pākehā settlers began to arrive in New Zealand in 1814, and their numbers slowly increased in the 1820s and 1830s (Phillips & Hearn, 2013). The settlers brought with them a multitude of different technologies, ranging from agricultural tools and household items, to new forms of storing knowledge. Although there were occasional skirmishes, this initial contact period was characterised by increased opportunities for Māori to trade, and to embrace skills associated with new technology (Butterworth, 1990; Petrie, 2013). The missionaries, who Binney (1968) believes were intent on converting Māori to Christianity and ‘higher’ states of civilisation, brought schooling and literacy (Butterworth, 1990; Jenkins, 1991; Walker, 1990). Astle (1784) captured the general stance of the West with regard to literacy, asserting “the noblest acquisition of mankind is speech, and the most useful art is writing. The first, eminently distinguishes man from the brute creation; the second, from uncivilized savages” (p. 4-5). Street (1995) contends equating literacy to states of civilisation created a ‘great divide’ between the ‘primitive’ and the ‘civilised’, where oral societies were characterised as inferior, and bereft of the civilisation that literacy offered. Besnier (1995) adds that a position such as that espoused by Astle suggests that only literacy as it is conceived of by Western cultures promised enlightenment, and an inevitable rise to civilisation. Indeed, literacy was a powerful instrument in Western colonisation efforts that were designed to ‘civilise’ people who were ostensibly inferior. Moon (2016) argues:

The civilising power of literacy was undoubtedly one of the main weapons in the armoury of British imperial expansion. It enabled the definition, classification, quantification and regulation of indigenous peoples and their cultures while dismantling and reconstructing some of those cultures in a form that was more acceptable to the coloniser. (p. 40)

The broad agenda of colonisation implemented by Pākehā settlers by various means is not the focus of this work. However, it is imperative to acknowledge the sociohistorical context of this period in New Zealand, in which the interplay of Māori and literacy occurred, and the effects (which can be viewed as both positive and negative) of British imperialism and colonisation on Māori society and, to an extent, on Māori self-determination. This includes the significant influence literacy had on Māori societies, which changed their exclusively oral nature. Mahuika (2012) notes:

There is little doubt that writing and print altered the template of what was once a primarily oral encounter.... Oral traditions have borne the brunt of a

colonial tidal wave that changed the way Māori oral traditions were passed on and understood. (p. 95)

Haami (2006) concurs, and observes the arrival of the written word had “huge implications for the validation and mana [authority] of oral expression” (p. 15). However, Binney (2001) emphasises that Māori were not simply passive victims of literacy but rather actively embraced print culture, reading, and books. McKenzie (1985) cites the “enthusiastic reports back to London of the remarkable desire of the Māori to learn to read, the further stimulation of that interest through native teachers, the intense and apparently insatiable demand so created for books” (p. 13) as evidence of the emphatic adoption of literacy by Māori groups. The remarkably swift acquisition of literacy is also noteworthy. McKenzie comments that in 1815 when Thomas Kendall set about re-enacting what he terms “one of the most momentous transitions in human history” (p. 10) – that is, the reduction of speech to its record in alphabetic form – Māori were:

A Neolithic race with a wholly oral culture [yet] what took Europe over two millennia to accomplish could be achieved – *had* been achieved – in New Zealand in a mere twenty-five years: the reduction of speech to alphabetic forms, an ability to read and write them, a readiness to shift from memory to written record.... (p. 10)

This begs the question: how was such a remarkable feat accomplished? In order to teach reading or writing the first step was to establish an orthography, and Kendall’s first rudimentary list of letter forms, which was produced in 1815, was revised and sent to Samuel Lee, Professor of Arabic at Cambridge University. Kendall, together with two Māori chiefs, Hongi Hika and Waikato, travelled to England in 1820 and produced ‘*A grammar and vocabulary of the language of New Zealand*’ (McKenzie, 1985). An interesting feature of this 230-page manuscript is most of the English alphabet was used. However by 1830, the alphabet was reduced to five vowels and eight consonants. Kendall’s transcription of te reo Māori significantly altered the sound of the language, created a standardised form of te reo Māori, and, in some instances, suffocated the unique tribal dialects, which were spoken in various parts of the country. Smyth (1946) captured the change to te reo Māori with his statement:

We can but dream of what its [te reo Māori] beauty must have been before its contact with the European language, and the entry of inevitable harshness consequent upon the effort to transfer its oral beauty to print in an alphabet supplied from a foreign tongue. A complete representation was of course impossible. (p. 13)

In addition to the aesthetic changes noted by Smyth, Moon (2016) suggests that the conversion of te reo Māori to written form also resulted in social changes in that it led to a shift in power from resting with those who were masters of oratory to those who possessed the ability to read and write. Indeed, Jameson (1842) observed that for the younger generation of Māori, to be without literacy skills was considered to be “a mark of inferiority, against which their pride revolts” (p. 261-262), and his observation illustrates the value Māori saw in acquiring and mastering literacy skills.

The establishment of the first school at Rangihoua in the Bay of Islands in 1816, and the ever-increasing amount of printed material circulating in New Zealand, continued to foster the swift acquisition of literacy among Māori communities. Accounts of the speed and enthusiasm with which Māori adopted literacy are manifold. For example, an early trader observed:

If one native in a tribe can read and write, he will not be long in teaching the others. The desire to obtain this information engrosses their whole thoughts, and they will continue for days with their slates in their hands'. (Brown, 1845. p. 5)

In 1829, it was noted in the *Missionary Register* that “not six years ago they [Māori] commenced the very rudiments of learning: now, many of them can read and write their own language, with propriety, and are complete masters of the First Rules of Arithmetic” (p. 372). Similarly, in 1834 it was recorded in the *Missionary Register* that “the writing of the senior classes was really much better than that of most schoolboys in England... it was remarkably free from orthographical mistakes” (p. 60). And:

For this long time past it has become fashionable for the young people to try to learn to read.... Such is the wish of many of the Natives to learn to read, that on several occasions they have brought pigs, which would weigh from fifty to an hundred pounds, and offered them as payment for a book. (*Missionary Register*, 1834, p. 119)

Learning that occurred in schools flooded into communities; the more literate that Māori readers became, the more their perceptions and knowledge expanded, and the more printed materials fostered the broadening of their horizons, the higher the demand for these materials became (McKenzie, 1985; Moon, 2016). However, early texts in te reo Māori were almost exclusively biblical in their content (Jenkins, 1991), and some scholars argue this brought with it its own implications in terms of the

colonising agenda of the settlers (Binney, 1968; Butterworth, 1990; Jenkins, 1991; Walker, 1990; Ward, 1995). However, others reject such a relentlessly negative view of the impact of colonisation<sup>15</sup> on Māori communities and culture (Ballantyne, 2011; McKenzie, 1985; Moon, 2016; Stevens, 2010), and maintain that following the active seeking of literacy by Māori tribal groups, Māori encountered new skills (reading and writing), new ways of presenting and storing knowledge (books and maps), and new institutions through which they could access knowledge (mission stations and schools).

In a seminal article discussing the rapid uptake of literacy across Polynesia in the 19<sup>th</sup> century, Parsonson (1967) argues that Māori established relationships with missionaries, and were intent on gaining access to education through the mission schools in order to acquire literacy, as opposed to religious redemption. Others dispute this, however, and in the case of the South Island iwi, Ngāi Tahu, Stevens (2010) suggests that the decimation and destruction caused by both the Musket Wars and foreign diseases on their population fostered an interest in Christianity independent of the desire to become literate. However, what is evident in both of these viewpoints is that Māori exercised agency and self-determination in seeking to become literate, and this skill was then passed on to others in their communities.

The employment of agency also undermines the ‘fatal impact’ notion often attached to colonisation, which Ballantyne (2011) describes as one of two dominant interpretations of the relationship between Māori oral traditions and literacy, where it is argued that contact with Pākehā initiated the rapid, inevitable, and almost total destruction of Māori culture and society. The ‘fatal impact’ contention suggests that literacy was a corrosive force introduced by missionaries to undermine the rigour of Māori oral traditions, and replace Māori knowledge and culture with Pākehā hegemony. Essentially, the main assumptions inherent in this view are that literacy acted as a sort of agent for colonial imperialism, and that in learning to read and write, Māori forsook their own culture for that of Pākehā (Jenkins, 1991).

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<sup>15</sup> It has been mentioned that a detailed discussion on the intricacies of the colonisation phenomenon is beyond the scope of this study. However, the impact of colonisation, in particular what numerous scholars view as the devastation caused by 20<sup>th</sup> century education policies and practices (Macfarlane, 2015; Penetito, 2010; Simon & Smith, 2001), cannot go unmentioned in this work. What began as a largely mutually-beneficial relationship between Māori and Pākehā quickly turned into an all-out assault on Māori communities as the full might of British colonial intentions was unleashed on tribal groups, rendering many Māori cultural and linguistic vestments virtually unrecognisable when compared with their vitality a century or so earlier.

The counter to the ‘fatal impact’ argument is the notion of ‘cultural continuity’, where it is suggested that literacy had limited impact on Māori culture and society, and that despite land loss, conversion to Christianity, urbanisation, and colonial education, pre-European Māori cultural traditions continue to prevail. However, Stevens (2010) argues that such binary interpretations of Māori experiences with literacy fail to recognise the historical nuances evident at the time, and the vast range of responses among Māori communities to literacy (and to Pākehā presence in general), which ranged from resistance to indifference to collaboration. Stevens’ contentions are supported by others, who point out the variety of ways in which elements of traditional knowledge and practices were woven into a new culture of literacy, which generated innovative and nuanced responses to colonial authority (Ballantyne, 2005; Curnow, Hopa, & McRae, 2002; Head, 2007; Paterson, 2006). For example, Moon (2016) discusses the agency exercised by Māori in adopting literacy, and observes that from the inception of the first government newspaper in te reo Māori in 1842 until the early 20<sup>th</sup> century, 42 Māori newspapers, printed in te reo Māori, were in circulation. These papers served a multitude of purposes, including, at one point, providing a means to communicate wartime propaganda to Māori during the New Zealand Wars. Moon argues that printed te reo Māori became part of the ‘political frontline’ during the wars, and indicates that such messages “appealed to readers’ logic and sense of fairness, and warned of the threat to civilisation and Christian principles (playing on the missionaries’ earlier success in converting Māori to the religion) that war would inevitably entail” (p. 167). O’Regan (2017) comments on the influence of Māori newspapers, as well as Māori enthusiasm for literacy in general, stating:

There is usually genuine surprise and shock when I start to introduce the history of Māori literacy prowess... with the Māori newspapers and proportionately higher rates of literacy at the turn of the [20<sup>th</sup>] century than non-Māori. Over 95 per cent of my academic and professional audiences are usually completely unaware of the fact that Māori have such a literary heritage. (as cited in Bryant, 2018, p. 5)

The complexities and richness of Māori literacy traditions alluded to by O’Regan were documented by Haami (2006), whose work counters the modern-day notion that “reading and writing [were] Pākehā things that Māori weren’t interested in and didn’t need”<sup>16</sup> (p. 9). Instead, Haami argues that Māori “enthusiastically... utilised and

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<sup>16</sup> It is worth noting that this sentiment was expressed to the researcher during the course of completing this thesis, specifically that “literacy isn’t a Māori thing”.

adapted literacy for their own purposes.... Reading and writing is not exclusively for Pākehā but has... been entrenched in Māori society for over a century” (p. 10). Head and Mikaere (1988) suggest that literacy was adopted by Māori “at the level of need, the level of usefulness” (p. 19). Stevens (2010) concurs, and adds that Māori were intent on becoming literate in order to be able to effectively negotiate in Pākehā political contexts. Moreover, in 1874, in a letter to a Māori language newspaper, a Māori commentator observed “we are a people who take great pleasure in reading” (as cited in Ballantyne, 2006, p. 22). Therefore, it is reasonable to suggest that Māori interest in literacy was not limited to its usefulness as a tool to foster engagement in civic affairs but rather extended beyond that to the realm of leisure. Curnow, Hopa, and McRae (2002) note that Māori enthusiasm for literacy is evidence of a “belief in the importance of print to educate, inform, reform, and entertain” (p. xii), and this extract supports the notion of a more nuanced desire for literacy among Māori communities.

The intentions of this section were to illustrate the rapid and exuberant manner in which Māori embraced literacy, and to provide some insight into how this changed both the Māori language, and Māori society. These are important contextual considerations in the context of this study, because this study explores emerging literacy skills in bilingual Māori children. It is suggested by the researcher that highlighting the remarkable acquisition of literacy by Māori a few generations ago could act as a source of empowerment for Māori learners today insofar as that it offers an alternative to the deficit discourse so often perpetuated in research on Māori and education. Furthermore, because the literacy activities tested in this study are practiced in both English and te reo Māori, it is important to acknowledge the impact of literacy on what was once a purely oral language. And finally, it is crucial to highlight the inclusion of pedagogical approaches associated with traditional Māori society and oral traditions in the intervention trialled in this work. The overarching theme of self-determination is also evident in elements of this section, as well as the preceding paragraphs addressing Māori oral traditions. In short, Māori communities were autonomous entities, freely able to speak their language, express their culture, and practise their customs. The swift and exuberant adoption of literacy illustrates the value Māori communities placed on literacy as a tool that had an ability to broaden their horizons, contribute to their knowledge and learning, and enhance their self-determination. The following section shifts the focus from historical aspects associated with Māori society and culture to an exploration of what is widely

recognised as being the single best predictor of literacy outcomes, specifically, phonological awareness.

### **2.3 Phonological Awareness**

Learning to read fluently and with ease is a complex process contingent on the development and integration of numerous linguistic and cognitive processes (Kamhi & Catts, 2012), one of which is skills associated with phonological awareness. This section examines phonological awareness, which Gillon (2004) defines as “an individual’s awareness of the sound structure, or phonological structure, of a spoken word” (p. 2), as a key element in children’s literacy development. A significant body of research indicates there is a strong link between phonological awareness and literacy acquisition. Indeed, some commentators argue that a child’s level of phonological awareness is one of the best predictors of reading performance (Bird, Bishop, & Freeman, 1995; Liberman, Shankweiler, & Liberman, 1989; Lundberg, Olofsson, & Wall, 1980; Mann, 1991; Torgesen, Wagner, & Rashotte, 1994). Phonological awareness is critical in the early stages of literacy development because it fosters the acquisition of strong word-recognition skills (Al Otaiba, Lake, Greulich, Folsom, & Guidry, 2012), which enable children not only to read fluently and effortlessly but also, when combined with other skills critical for early literacy success such as strong vocabulary knowledge, assist them in achieving the fundamental purpose of reading – that is, the comprehension of written material (Gillon, 2018; Gough & Tunmer, 1986).

A critical consideration is the means by which children develop an acute awareness of the sound structure of a word. Gillon (2018) contends children learn about the sound structure of language as a result of a biological inclination to acquire a system through which to communicate orally. Perception of the sound structure of language begins early in life. Leyva, Sparks, and Reese (2012) suggest phonological awareness is one aspect of metalinguistic understanding that emerges during the preschool years, well before children learn to read, and continues to develop into the primary school years. However, before children reach preschool age, the development of an awareness of the sound structure of their native language or languages has commenced. Gillon (2018) summarises children’s early phonological awareness development, and notes that from as early as four months of age, infants are able to perform a number of tasks associated with early literacy development, including

distinguishing between utterances in their native language, and those in other languages, and identifying the same syllable in different utterances. In her earlier work, Gillon (2004) claims that when children hear their native language or languages spoken as babies and toddlers, an implicit phonological knowledge is fostered, which helps them learn to talk. These skills develop at an unconscious level, and Yavas (1998) contends that this implicit knowledge supports a number of skills which emerge as children develop, such as enabling them to determine if they are hearing words that are foreign, and helping them to pronounce words correctly.

Unlike the development of the sensitivity to speech sounds that occurs during infancy, Mattingly (1972) maintains that in order to progress skills associated with phonological awareness, children must make explicit the implicit knowledge acquired during infancy. This involves separating the various sounds that combine to form a word from the overall meaning of the word, and consciously reflecting upon those sounds. As children become explicitly aware of the phonological structure of words, their skills progress in an incremental manner. Evidence of a developmental progression in the emergence of phonological awareness abilities to detect sounds in words first emerged through research conducted by Liberman et al. (1974), who hypothesised that children would be able to master segmenting a word into syllables before they were able to separate a word into the various individual sounds it is comprised of. Justice and Pence (2005) concur, and argue that as phonological awareness skills develop, children are able to segment words into increasingly smaller parts, and eventually into the individual sounds, or phonemes, of words. These stages of development include an ability to detect sounds at the syllable level, onset-rime level, and, following this, at the phoneme level, as well as skills in deleting and blending sounds in words and syllables (Anthony et al., 2002). Therefore, phonological awareness is pivotal in supporting literacy skills because an understanding of the sound structure of words enables children to ‘sound out’ a word in print, or, in other words, read it.

The skills associated with phonological awareness explored in this study are the ability to segment words at the syllable level, and to identify sounds at the onset-rime and phoneme level. The following paragraphs cover points related to those skills that are self-evident in their essence, and are therefore summarised accordingly. Gillon (2018) notes that phonological awareness can be broken down into syllable awareness, onset-rime awareness, and phoneme awareness, and numerous measures can be employed to determine a child’s ability at each level. The

assessment tools utilised in this study are discussed in Chapter Three of this thesis. Syllable awareness is essentially comprehending that words can be divided into syllables, and includes an understanding that each syllable in a word consists of a vowel or vowel sound; that syllable segmentation follows the stress pattern of a word; and that consonants that cannot be clustered together do not begin or end a syllable. Treiman (1993) contends that an understanding of those three principles are indicative of the development of syllable awareness in a child.

However, it is important to note that these principles relate to syllable awareness as it is understood in the English language. Harris (2007) encourages consideration of the different orthographical features of languages, and points out that English and te reo Māori have vastly different syllable structures. Te reo Māori is a syllable-timed syllabic language with a regular and transparent orthography, whereas English is a stress-timed language with an irregular, alphabetic orthography. Therefore, it is possible that given the differences between the two languages, the principles Treiman (1993) suggests are indicative of the development of syllable awareness in a child may not apply in the context of te reo Māori. Syllable awareness is assessed in this study pre-, mid-, and post-intervention in order to generate some understanding of the phonological awareness skills in both English and te reo Māori of the children participating in this research. Details of this are provided in Chapter Three of this work.

Like syllable awareness, onset-rime awareness is also self-explanatory, and involves an awareness that syllables and words can be divided at the onset-rime level. Gillon (2018) illustrates this by noting that “in the word *sit* the *s* is the onset of the syllable, and *it* is the rime of the syllable. In the word *start*, *st* is the onset and *art* is the rime unit of the syllable” (p. 6). Onset-rime skills are most commonly stimulated and measured through rhyming tasks, where words share a common ending (rime unit), which can be separated from the beginning of the word (onset). Harris (2007) notes that rhyming in te reo Māori is not viewed as a skill in the same way it is perceived in English. Therefore, in light of this observation by Harris, and the differences in orthography between the two languages, it is possible that onset-rime does not apply in te reo Māori in the same way it does in English. Onset-rime skills are not assessed in this study; however, the intervention trialled in this work uses rhyming activities in order to stimulate onset-rime awareness. This is discussed in greater depth in Chapter Three of this thesis.

Finally, phonological awareness at the phoneme level, which is referred to in the literature as either ‘phoneme awareness’ or ‘phonemic awareness’, is an understanding that words are comprised of individual sounds. Gillon (2004) points out there are numerous ways to measure this skill; however in the context of this study, a ‘phoneme matching’ task<sup>17</sup> (Wagner, Torgesen, Rashotte, & Pearson, 2013) is used to determine the phoneme awareness skills of the children participating in this research, the details of which are offered in Chapter Three of this work. In the case of phoneme awareness, it is unlikely that orthographical differences between te reo Māori and English would affect the theoretical assumptions associated with this skill because words in both languages must include an initial phoneme, and a child’s ability to detect that sound should not be influenced by the linguistic differences evident in each language.

Gillon (2018) observes that numerous studies have proven the power of phoneme awareness in predicting literacy outcomes for children, but notes that studies investigating syllable and onset-rime awareness demonstrate some inconsistency in their results. In the case of onset-rime awareness, researchers are divided in their views on its ability to predict the literacy skills children may possess as they move through primary school. On the one hand, some researchers suggest onset-rime awareness is a developmental precursor to phoneme awareness (Bryant, MacLean, Bradley, & Crossland, 1990; Goswami & Bryant, 1990; Wood & Terrell, 1998), and that the ability to recognise words and sounds which rhyme helps children to read and spell unfamiliar words because they draw from their existing knowledge of familiar words (Goswami, 1994). However, conversely, others argue onset-rime awareness offers little insight into how children’s literacy may develop (Carrillo, 1994; Duncan & Johnston, 1999; Hulme et al., 2002).

Similarly, studies exploring the predictive power of syllable awareness have produced mixed findings. In a study investigating the relationship between syllable awareness in preschool children and literacy performance during the first two years of primary school, Wood and Terrell (1998) did not find syllable awareness in preschool children was able to predict literacy outcomes for children in the early years of primary school. However, in contrast to this school of thought, Engen and Høien (2002) found that syllable awareness was able to predict variances in word recognition and performance in reading comprehension tasks in first-grade, Norwegian-speaking

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<sup>17</sup> ‘Phoneme matching’ is referred to in this work as ‘initial phoneme identification’.

children. Of relevance in the context of this study, and the understanding that te reo Māori is a phonetically regular language, is the suggestion that syllable awareness may play a more significant role in predicting literacy outcomes in languages that are phonetically regular (Denton, Hasbrouck, Weaver, & Riccio, 2000). While researchers remain at odds on the predictive relationship between syllable awareness, and onset-rime awareness, and literacy outcomes, it is widely accepted that phoneme awareness plays a significant role in literacy development. However, the researcher did not want to dismiss the idea that syllable awareness and onset-rime awareness are developmental precursors to phoneme awareness, and included a focus on these skills in the intervention trialled in this work.

At this juncture, it is necessary to note that a significant proportion of the current research exploring phonological awareness is concerned with its applications to speakers of English, with very few studies existing that address the relationship between phonological awareness and te reo Māori. However, some studies have documented the relationship between phonological awareness and early literacy success in other non-English languages, such as German (Näslund, 1990), Hebrew (Bentin, Hammer, & Cahan, 1991), Danish (Lundberg, Frost, & Petersen, 1988), Swedish (Lundberg, Olofsson, & Wall, 1980), Portuguese (Cardoso-Martins, 1991), Italian (Cossu, Shankweiler, Liberman, Katz, & Tola, 1988), and French (Alegria, Pignot, & Morais, 1982; Comeau, Cormier, Grandmaison, & Lacroix, 1999). Of particular value in this research is consideration of studies investigating the role phonological awareness plays in supporting literacy development in orthographically-regular languages, of which te reo Māori is one. For example, Denton et al. (2000) explored the relationship between phonological awareness and literacy development in the Spanish language. They asked six key questions, two of which are of relevance in this study, specifically:

1. Is phonological awareness a good predictor of reading achievement in Spanish?
2. Does phonological awareness in Spanish have an effect on English reading achievement?

In response to the first line of enquiry, Denton et al. found that Spanish-speaking children with strong phonological awareness skills generally experience literary success. Other studies support their finding, and contend that phonological awareness in Spanish is a solid predictor of literacy achievement (Bravo-Valdivieso, 1995; Carrillo, 1994; Durgunoglu, Nagy, & Hancin-Bhatt, 1993; Parra, Hoff, & Core,

2011), thus suggesting that phonological awareness could be critical to literacy acquisition in other languages that have regular orthographies, such as te reo Māori.

In considering the effect that phonological awareness in Spanish has on reading achievement in English, Denton et al (2000) found that strong skills in Spanish phonological awareness may make it easier for children to learn to read and spell English words. They contend that processing skills acquired in one language (in this case, Spanish) can be applicable to other languages (such as English). Essentially, the child learns how languages in general work, and they develop strategies for processing language, which can be applied to other languages. Similarly, Cummins (1981) maintains that literacy instruction in one language supports successful literacy development in another language, and Royer and Carlo (1991) found that children's reading performance in English was highly correlated with their performance in Spanish, where proficient readers in Spanish were also skilled readers in English. In addition to this, Ganschow and Sparks (1995) observed evidence of cross-language transfer of phonological awareness skills in a study of English-speaking children studying Spanish as a second language. They discovered that explicit, direct instruction in Spanish phonology resulted in significant gains in the English phonological awareness skills of those participating in the study.

In summary, Denton et al. (2000) maintain that phonological awareness ability in Spanish is a key predictor of literacy success. Furthermore, a high level of phonological awareness in Spanish may aid in the development of phonological awareness skills in English, and strategies acquired in one language about how language works may be readily applied to assist with linguistic development in another language. The contentions put forward by Denton et al. are of relevance in this study because research into the role phonological awareness plays in supporting literacy development in te reo Māori is scarce. Therefore, consideration of studies that have explored phonological awareness in orthographically-regular languages may offer some insight into findings that emerge in this research. However, it is imperative to stress that Spanish and te reo Māori have vastly different histories, and that te reo Māori has survived decades of suppression in New Zealand schools in the 20<sup>th</sup> century, to the extent it is listed as an endangered language (Moon, 2016). Therefore, while consideration of the emergence of phonological awareness in other orthographically regular languages, such as Spanish, may offer some insight into how phonological awareness could develop in te reo Māori, it is strongly argued that te reo Māori must be considered alongside its unique historical context, which has

resulted in contemporary differences when compared with other orthographically regular languages, globally.

Phonological awareness has received significant attention in New Zealand in recent decades. A report released in 1999 by a Reading Taskforce and Experts Group recommends “greater attention needs to be focused on the development of word-level skills and strategies in beginning reading instruction, including the development of phonological awareness” (Smith, 2000, p. 141). Since then, numerous studies have been conducted in New Zealand that show an increasing emphasis on phonological awareness (Berryman, Boasa-Dean, & Glynn, 2002; Carson, 2012; Gillon & Macfarlane, 2017; Harris, 2007; McNaughton, 2002). However, Harris (2007) notes that typically the tools used to assess phonological awareness have been developed with monolingual English-speaking children in Australia, Britain, and the United States. This is a significant consideration in the context of this study because of its focus on the emerging literacy of bilingual Māori children. Research indicates that the phonological awareness skills children learn are a reflection of the language or languages they hear in their own environments (Bruck & Genesee, 1995; Gillon, 2018; Krägeloh & Neha, 2010; Mumtaz & Humphries, 2001). Krägeloh and Neha (2010) encourage consideration of differences between features of languages, and the impact these may have on phonological awareness skills. Often, studies conducted in New Zealand that employ measures developed with monolingual English-speaking children have resulted in a “phonological awareness deficit discourse” (Harris, 2007, p. 61) in relation to the achievement of Māori children, particularly those who are bilingual. Therefore, this study strongly promotes the use of culturally relevant frameworks and practices, which consider the linguistic and cultural contexts of the children and whānau involved in the research. Details of these frameworks and practices are outlined in Chapter Three of this work.

In summary, phonological awareness plays a central role in this study for three main reasons. Firstly, phonological awareness is identified as a pivotal skill in supporting children’s emerging literacy, therefore it is imperative to explore this phenomenon in the context of a study on early literacy development. Moreover, there is a considerable amount of research which indicates there is a strong link between phonological awareness skills in preschool children predicting reading achievement during formal schooling years (Bradley & Bryant, 1983; Denton et al, 2000; Gillon, 2018; Liberman, 1971; Lundberg, Olofsson, & Wall, 1980; MacDonald & Cornwall, 1995). Secondly, research on phonological awareness and te reo Māori is largely uncharted territory

(Harris & Kaur, 2012), and because this study involves bilingual children, it is necessary to generate as much understanding as possible about the interplay between phonological awareness and te reo Māori. Finally Leyva et al. (2012) contend that a key factor, which may influence the development of children's phonological awareness, is family practices. This study has a high focus on the role of whānau in promoting children's literacy development insofar as the intervention trialled in this study examines the shifts that may occur in children's phonological awareness skills as a result of activities conducted by whānau. Therefore, it is important to consider the impact that whānau may have on children's phonological awareness skills, and emerging literacy in general. This is discussed in Section 2.6 of this chapter.

## **2.4 Key Elements of Oral Language**

Phonological awareness, while generally recognised as being a key predictor in children's literacy outcomes, is not the only skill needed to ensure success in literacy. The following paragraphs examine particular aspects of oral language, where, for the sake of brevity, in the context of this study the term 'oral language' refers specifically to vocabulary knowledge, and the ability to comprehend and tell a story, as further elements critical to supporting children's emerging literacy. Like phonological awareness, vocabulary knowledge, and the ability to comprehend and tell a story, are strong predictors of children's reading abilities (Champion, Hyter, McCabe, & Bland-Stewart, 2003; Hart & Risley, 1995; Kusleika, 2014; Leyva et al., 2012; Wells, 1986). Once a child has mastered basic decoding and encoding skills, these aspects of oral language, particularly vocabulary knowledge, help a child to determine if a word makes logical or grammatical sense in a text (Gillon, 2018). Justice and Pence (2005) contend that children learn most words without explicit instruction through social interactions with others, which begin well before children start formal schooling. Robbins and Ehri (1994) observe that the ability to understand and remember the meanings of new words depends strongly on how well developed a child's vocabulary already is. Vocabulary knowledge is cumulative in nature, where children with larger vocabularies tend to learn new words with relative ease compared to children with smaller vocabularies. Therefore, a strong foundation in vocabulary knowledge in particular before children start school is a crucial factor in allowing them to grow skills that support them when they learn to read.

Furthermore, there is an interdependent relationship between phonological awareness and vocabulary knowledge insofar as that children with larger vocabularies have better phonological awareness skills (Bowey, 2001; Champion et al., 2003; Gathercole, Service, Hitch, Adams, & Martin, 1999; Leyva et al., 2012; Wise, Sevcik, Morris, Lovett, & Wolf, 2007). Champion et al. (2003) contend that as vocabulary develops, there is a growing need to identify differences between similar sounding words. This leads to increasingly segmented lexical representations, which demands children employ phonological awareness knowledge. Additionally, vocabulary is strongly linked to reading comprehension. Snow, Burns and Griffin (1998) point out that being able to decode a text on its own is not enough; children also need to comprehend the content of the text in order to draw meaning from it. An ability to understand text is reliant on familiarity both with vocabulary, and the structure of written language. Therefore, phonological awareness and vocabulary are interrelated, and present as essential components of learning to read (Dickinson, McCabe, Anastasopoulos, Peisner-Feinberg, & Poe, 2003).

A number of studies note the pivotal role that family practices can play in stimulating children's vocabulary knowledge, and the ability to comprehend and tell a story (Burns, Griffin & Snow, 1999; Bus, 2001; Dickinson & Smith, 1994; Justice & Pence, 2005; Neumann, Hood, & Neumann, 2008; Reese, Sparks & Leyva, 2010; Salmon & Reese, 2016; Scarborough & Dobrich, 1994). Weitzman and Greenberg (2002) note that family members can support the development of these skills by making a few simple adjustments to the way they converse with their children, such as including open-ended questions in conversations, and offering additional information to what a child says. Similarly, Reese (2013) promotes reminiscing about past family events as simple conversations that can stimulate growth in these key elements of children's oral language, which is a strategy adopted for use in the intervention trialled in this work. This is discussed in detail in the following chapter. Finally, Wells (1986) documents a strong connection between early experiences of listening to stories, and the contribution these experiences make to the growth of vocabulary knowledge, and the ability to comprehend and tell a story, as well as to educational achievement.

What is highlighted in these strategies employed to stimulate these particular oral language skills is not only the number of conversations that whānau initiate with their children but also the quality of those interactions. Leyva et al. (2012) argue that the number and quality of conversations whānau hold with their children plays a significant role in the development of children's vocabulary knowledge, as well as

their ability to comprehend and tell a story. Numerous studies document the relationship between the frequency and quality of conversations between whānau and children (where ‘quality’ includes features such as the number of different words used, initiation of the conversation, use of rare words and open-ended questions, and explaining meanings of new words), and a variety of abilities, including vocabulary knowledge, narrative development, and story comprehension (Dickinson & Tabors, 2001; Hart & Risley, 1995; Leyva et al., 2012; Pan, Rowe, Singer, & Snow, 2005). Therefore, holding purposeful, targeted, interactive conversations with children, in which some key indicators of a quality conversation are utilised, can significantly improve these key elements of children’s oral language abilities.

In summary, vocabulary knowledge, and the ability to comprehend and tell a story, have a central role in this study for two main reasons. Firstly, proficiency in these key elements of oral language plays a salient role in supporting emerging literacy, both as a set of skills in their own right, and in their interdependent relationship with skills in phonological awareness. And secondly, this study focuses significantly on the role of whānau in supporting emerging literacy. An extensive body of research cites the influence whānau can have on developing these elements of oral language; therefore, vocabulary knowledge, and the ability to comprehend and tell a story, are key phenomena to explore in the context of this research.

## **2.5 Bilingualism**

This study involves the use of two languages, and focuses specifically on emerging literacy in bilingual children. For these reasons, it is necessary to offer some commentary on bilingualism, and the role it plays in literacy development. Gillon (2018) acknowledges the growing body of research on bilingual learners, which aims to generate greater understanding of literacy development in bilingual children. In particular, this research seeks to identify potential cross-language factors, which may influence literacy development. The concept of ‘transfer effects’ is a key consideration in research exploring literacy in bilingual children, where, in psychological research, transfer effects are indicative of a statistical correlation between skills in each language a child is exposed to. In other words, transfer effects are evidence of some level of interaction between the two languages (Wang, Ko, & Choi, 2009). Prevoo, Malda, Mesman, & van IJzendoorn (2016) observe the cross-linguistic effect from oral language to early literacy, and Gillon (2018) notes that

literacy skills in one language have been known to influence literacy skills in another language, which suggests some level of transfer between the two languages. This could mean that phonological awareness in one language may support the development of phonological awareness in another language.

Wren, Hambly, and Roulstone (2013) conducted a study investigating if there is an advantage or disadvantage for bilingual children in the development of phonological awareness skills compared to monolingual children. Their findings revealed bilingual children performed better or equal to monolingual children on phoneme segmentation, blending, isolation, substitution, and deletion tasks. However, Bialystok, Majumder, & Martin (2003) suggest the strength of this possible advantage may be influenced by the similarity of the languages children are exposed to. For example, children learning English, French, Italian, or Spanish presented with a stronger positive relationship in phonological awareness than children learning English and Chinese. D'Angiulli, Siegel, and Serra (2001) add that bilingual children, whose first language is alphabetic and orthographically regular (for example, Portuguese, Italian, Urdu), while their second language is alphabetic and irregular, such as English, tend to transfer phonological awareness knowledge from their first language to their second. However, Harris (2007) contends the transfer of phonological awareness skills is not evident when the first language is syllabic (for example, te reo Māori) and the second is alphabetic, like English. Therefore, Harris hypothesises phonological awareness is more crucial for alphabetic languages, such as English, and does not hold the same relevance in supporting literacy development in te reo Māori.

Another school of thought supported by Everatt, Smythe, Ocampo, and Vei (2002) is that a child with literacy developing in two languages may show positive gains in phonological awareness if one of the orthographies is highly transparent, such as that of te reo Māori. They contend that those skills could be transferred and applied to a second, less transparent language, such as English. In contrast, Gillon (2018) argues that the theory of phonological awareness skills transferring between languages is complex and uncertain, and cites studies where monolingual children have performed better than bilingual children (see Lesniak, Myers, & Dodd, 2014; Grech & Dodd, 2008). However, the suggestion that a high level of phonological awareness in te reo Māori may support the development of those skills in English is a key consideration worthy of exploration in this study, which, if found to be the case, could have wide-reaching implications in the areas of literacy development in

New Zealand, and the role te reo Māori may play in supporting emerging literacy in New Zealand children.

Hill (2015) notes that in New Zealand, research on effective practices that create bilingual and biliterate students, who are proficient in te reo Māori and English, is scarce. He posits that schools are “left to their own devices to experiment with Māori and English language components” (p. 33), and that often, research focuses on the contributions bilingual settings make to Māori language revitalisation, with English instruction added as an afterthought. However, based on a wealth of evidence from cross-language comparisons (Aro & Wimmer, 2003; Katzir, Schiff, & Kim, 2012; Landerl, 2000; Paulesu et al., 2000; Seymour, Aro, & Erskine, 2003), Krägeloh and Neha (2010) argue that the orthographic consistency of te reo Māori is likely to result in children rapidly learning to read in te reo Māori due to the ease with which letter-sound relationships can be established and understood. Additionally, like Everatt et al. (2002), they suggest that learning to read in an orthographically consistent language, such as te reo Māori, optimises the development of phonological awareness, which can later be transferred to literacy acquisition in irregular languages, such as English. Similarly, Clark (1995) contends that literacy skills in one language can transfer across to another language with little explicit instruction.

Essentially, this principle of linguistic interdependence asserts that once certain processes fundamental to learning to read have been learned, such as the development of phonological awareness skills, they can be applied to reading in almost any language (Berryman, 1994; Krashen & Biber, 1988; Pardo & Tinajero, 1993; Ramirez, Yuen, & Ramey, 1991). Bilingualism, and in particular the transfer of skills between languages, is a key consideration in this study because the children participating in the research attend a dual language early childhood centre, and are exposed to more than one language in the home, although at this point, it should be noted that English is the significantly more dominant language of each child participating in this study. In summary, Harris (2009) suggests that it is highly likely that emerging literacy in bilingual Māori children differs from that in monolingual English-speaking children. Therefore, it is necessary to explore the implications of bilingualism on children’s emerging literacy, and to generate greater understanding regarding the role te reo Māori may hold in supporting the acquisition of literacy in English. The following section investigates the final key consideration in this study, specifically, the role of whānau in fostering cognitive skills associated with literacy success.

## 2.6 Whānau Literacy Practices in the Home

There is converging evidence that preschool children's early literacy development is crucial for their later success in formal schooling and beyond. Moreover, there are compelling suggestions that whānau play a central role in children's emerging literacy (Cairney, 1995; Champion et al., 2003; Kusleika, 2014; Purcell-Gates, 1996; Reese, 2013; Weigel, Martin & Bennett, 2005). This section examines literacy and language practices in the home, and specifically looks at shared book reading, conversations, and storytelling within whānau, and the role these activities play in galvanising children's emerging literacy. As an initial orientation to this section, it is necessary to note the salient position of whānau in Māori society, which was mentioned in the opening sections of this chapter, and which has been widely documented over an extended period of time (Best, 1924; Firth, 1959; Hiroa, 1949; Hohepa, 1964; Kawharu, 1975; Metge, 1995; Orbell, 1978; Salmond, 1991; Winiata, 1967). Traditionally, children received their early education within the confines of the whānau (Metge, 1976), and in the context of this study, an important consideration is the contemporary influence of whānau as a key lever for high quality outcomes for Māori learners that include both social and academic achievement (Biddulph, Biddulph & Biddulph, 2003). A seminal tribal study focusing on Māori students experiencing success at school (Macfarlane, Webber, McRae & Cookson-Cox, 2014) reports that there is an overarching ubiquitous lever critical to the success of Māori learners, specifically whānau. This has resonance with a claim by Sharples (2009), who states:

Whānau know their children's potential, and they know how to release it, right from early childhood through to tertiary education. When whānau take ownership and are encouraged to invest in their children's learning, they are able to place high expectations on their children, and to support them to achieve the highest standards, our goal must be to transfer this experience into all schools (p. 5)

This extract illustrates the pivotal role whānau can play in children's learning and educational success, and highlights why this study focuses specifically on the effect of literacy activities and practices within whānau on children's emerging literacy.

In addition to this, it is pertinent to explore the influence whānau can have on children's emerging literacy, and more specifically, to examine the practices of shared book reading, conversations, and storytelling. Through their daily experiences, children encounter opportunities to develop and practise their emerging literacy

skills in a variety of settings, including their homes (Purcell-Gates, 1996). Strickland and Taylor (1989) argue that language and literacy are typically first encountered at home, and that the nature of this environment, and the practices that occur within it, are key to the development of children's literacy. Research shows that when whānau read books with young children, when a home environment is rich in literacy and language activities, and when the environment is supportive, children's emerging literacy abilities are greater, as is their motivation to read (Baker, Scher, & Mackler, 1997; Burgess, 1997; Kusleika, 2014; Senechal, LeFevre, Thomas, & Daley, 1998; Reese, 2013; Weigel et al., 2005; Wells, 1986).

Earlier research on literacy and language practices in the home often focused on shared book reading (Payne, Whitehurst, & Angell, 1994; Scarborough, Dobrich, & Hager, 1991; Wells, 1986). However, more recent studies suggest the home literacy environment is multifaceted, and that a variety of factors can influence children's literacy development (Burgess, Hecht, & Lonigan, 2002). Some studies consider the social demographic characteristics of whānau, such as levels of education and school experiences, and the correlation of these with children's literacy skills (Christian, Morrison, & Bryant, 1998; Duncan & Brooks-Gunn, 2000; Snow, Barnes, Chandler, Goodman, & Hemphill, 1991). This work explores the school experiences and outcomes of whānau, particularly in light of the history of colonisation within the education system (Bishop & Glynn, 1999; Harris, 2008; Macfarlane, 2015; Penetito, 2010), which some scholars contend has led to less than desirable educational experiences and outcomes for some whānau. Data sets concerning social demographic factors are used in Chapter Three to introduce the children participating in this study.

Moreover, and more particularly, the experiences and influence of mothers on children's literacy outcomes are important considerations in this work because it was the mothers who engaged with this research in far more significant ways than other members of a whānau. Weigel, Martin, and Bennett (2006) investigated the influence of mothers' literacy beliefs, experiences, and practices on children's emerging literacy. They found that mothers who take an active role in teaching children at home do so because they believe this provides opportunities for their children to perform better at school. These mothers also think that reading books with their children helps children to expand their vocabulary and knowledge, fosters a sense of morality, and strengthens communication and life skills. Additionally, these mothers have positive memories of being read to as children, and consequently,

enjoy reading with their own children. They also have higher expectations that their children will enjoy school, and that their children will progress to high levels in their careers. During shared book reading, these mothers were more likely to interact with their child by having their child help to tell the story, asking their child questions, letting their child ask questions, talking about pictures in the book, pointing to different letters and numbers, and relating the story to their child's life. These factors are key considerations in this study, and have been included in the activities associated with the intervention, which is described in detail in the following chapter. The children of these mothers outperformed the second cohort of children in the study in 78 per cent of the indicators used to assess the early literacy development of the children involved in the research.

The mothers of the children in the second cohort were more likely to believe preschool children are too young to be exposed to reading, and that teaching children is the responsibility of a school, not whānau. These mothers also reported numerous challenges to reading at home, which include a lack of reading materials and a quiet place, as well as difficulties engaging their children in shared book reading. They were less likely to read a book in an animated and interactive style, and seldom related the story to their child's life. Weigel et al. suggest these factors resulted in the children in the second cohort underperforming in comparison to those in the first group. In addition to this, Weigel et al. observe the mothers in the first cohort had more positive educational experiences than those in the second cohort, and were more likely to engage in reading themselves. Burgess et al. (2002) suggest the literacy habits children observe in the home environment may present a model for their own literacy behaviours, levels of interest, and outcomes. Weigel et al. (2006) concur, and argue that children who observe whānau engaging in literacy activities come to understand that literacy is a normal part of everyday life.

Finally, in addition to sharing books with their children at an earlier age and more often, the mothers in the first cohort also engaged their children in literacy activities beyond that of shared book reading. Such activities include drawing pictures, singing songs, telling stories, and playing games with their children. Snow et al. (1998) maintain these kinds of activities assist with the development of cognitive skills necessary for literacy acquisition, such as phonological awareness and oral language proficiency. In contrast, mothers in the second cohort were less likely to engage their children in the aforementioned literacy activities, although Weigel et al. (2006) acknowledge that these mothers may have involved their children in activities not

accounted for in this study, such as language-related experiences that occur through everyday activities like cooking, shopping, and completing other chores. In summary, Weigel et al. contend that mothers in the first cohort were more likely to actively provide a stimulating home literacy environment, and they argue this environment, and the various factors that led to its inception, resulted in positive early literacy outcomes for their children.

The findings of Weigel et al.'s study are corroborated by other works, which were not limited to the experiences and practices of mothers. For example, Sonnenschein, Brody, and Munsterman (1996) note that whānau reading behaviours, such as personal enjoyment of reading and time spent reading, can influence reading outcomes for children. Moreover, Burgess et al. (2002) argue that whānau literacy practices correlate with children's oral language, vocabulary knowledge, and phonological awareness skills. Weigel et al. (2005) surmise that whānau who read and write regularly may have larger vocabularies, which they use in the presence of their children. Furthermore, they contend that children who observe whānau engaging with reading materials may be more likely to engage their whānau in conversation about the materials, and to acquire a richer vocabulary and greater ability to discern between words as a result of these interactions. Therefore, this study considers literacy habits in the home, such as enjoyment of reading, and the effect these may have on children's emerging literacy.

Another factor considered in this research is more explicit in nature, and focuses on "efforts that directly engage a child in activities designed to foster literacy or language development" (Burgess et al., 2002, p. 413). Findings from numerous studies indicate that shared book reading, and verbal interactions with children, which include reminiscing about past events, asking open-ended questions, singing songs, reciting rhymes, telling stories, and playing games, are key activities that foster skills in oral language and phonological awareness, and therefore support children's emerging literacy (Burgess, 1997; Justice & Pence, 2005; Kusleika, 2014; Reese, 2013; Reese et al., 2010; Salmon & Reese, 2016; Weigel et al., 2005; Wells, 1986). The intervention trialled in this work employs the aforementioned activities in order to ascertain the effect they have on children's phonological awareness and oral language skills. Details of the intervention, and the manner in which those activities are incorporated into it, are provided in Chapter Three of this thesis.

## **2.7 Research Questions**

This study draws together the numerous aspects discussed in the preceding sections of this chapter, which culminate in the overarching research question: ‘What effect does a home-based literacy intervention have on the cognitive skills associated with children’s emerging literacy?’ The methodology and methods employed to attempt to generate some answers to this question are discussed in the following chapter, alongside details of the intervention trialled with the participants in this research. The cognitive skills examined in this work are phonological awareness, and more specifically, abilities associated with syllable awareness, onset-rime awareness, and phoneme awareness. An ability to comprehend and tell a story, together with vocabulary knowledge, are key factors in emerging literacy, which are also explored in this study.

In keeping with the traditional Māori practice of whānau providing an education to their children, this intervention is centred in the home, rather than the early childhood centre, and is delivered by whānau. Māori oral traditions and pedagogy play a central role in guiding the activities undertaken by whānau during the intervention. These activities were also informed by research discussed in Section 2.6 of this chapter, specifically the various tasks whānau can perform in order to support children’s emerging literacy, such as reminiscing about past events, asking open-ended questions, singing songs, reciting rhymes, telling stories, and playing games. With this in mind, a secondary line of enquiry in this work focuses on literacy practices in the home. Key aspects of this exploration are also discussed in Chapter Three of this thesis. Finally, one of the central aims of this work, evident in the title of the thesis, is the restoration of historical narratives relating to Māori interactions with literacy in order to foster contemporary success, both in literacy experiences and educational outcomes for Māori learners. In doing so, the overarching intentions of this study are to promote access to a fundamental human right, and to contribute to the self-determination of Māori individuals and communities, where self-determination is the principal theme of this research.

## **2.8 Summary**

The purpose of this chapter was to construct a contextual and conceptual framework through which the findings of this study can be viewed and interpreted, and to provide a rationale for the research questions. This literature review offered some

commentary on the various key aspects explored in this study, and the reasons they are necessary considerations in this research. Section 2.1 examined oral traditions in Te Ao Māori, and the way in which they have been incorporated into elements of this work. Section 2.2 provided some historical analysis of Māori interactions with literacy, specifically how this phenomenon impacted on Māori societies and te reo Māori. Consideration of these factors is crucial in this study because aspects of Māori oral traditions guided the development of the intervention trialled in this study. Furthermore, highlighting the enthusiastic and exuberant manner in which Māori groups adopted literacy in the 19<sup>th</sup> century encourages a move away from an enduring and harmful deficit discourse which is so often used in conversations about Māori education to the restoration of a narrative that draws from Māori history and self-determination in order to advance contemporary achievement.

Section 2.3 focused on what is arguably the single best predictor of literacy development, namely phonological awareness. Key elements of phonological awareness, and the place they have in this work, were discussed, specifically syllable awareness, onset-rime awareness, and phoneme awareness. It is crucial to give attention to these components because of the fundamental role it is contended they play in fostering children's emerging literacy skills. Additionally, these elements are used both in the intervention, and the assessment measures utilised to determine the level of children's phonological awareness skills. Therefore, some understanding of how they function is paramount.

In addition to examining phonological awareness as a critical component in this work, Section 2.4 of this chapter explored various aspects of oral language as key factors in children's emerging literacy. This section also discussed the relationship between oral language and phonological awareness, and considered the role of whānau in stimulating some of the skills associated with oral language.

Section 2.5 offered some commentary on bilingualism, which is a key consideration in this work due to the children participating in this study each being exposed to at least two languages in their home environment. They also attend a dual language early childhood centre. This section focused specifically on the transfer effects between languages, particularly those that present with different orthographies, and explored the advantages and disadvantages children who are bilingual may have with regard to their emerging literacy.

Finally, Section 2.6 considered language and literacy practices in the home, and addressed the influence of whānau involvement in children’s emerging literacy, in particular, the practices of shared book reading, conversations, and storytelling. The role of mothers in facilitating literacy development was given explicit attention. This research focuses on the effect of a home-based literacy intervention, which is run by whānau, on the cognitive skills critical to early literacy success. Therefore, it is important to examine previous studies on whānau involvement in children’s literacy development for two reasons. Firstly, whānau hold a central position in Māori social structures, and acknowledgement of this in the context of a study that engages Māori whānau is imperative, and secondly, the intervention trialled with participants is guided by research which promotes shared book reading, conversations and storytelling as key whānau activities that support children’s emerging literacy. It is also pertinent to note that the intervention trialled in this study is informed by Māori ontologies and epistemologies, and supports the ‘ground up’ approach encouraged by Bialostok and Whitman (2006). Consequently, these activities contribute to the overarching theme in this work, specifically the self-determination of Māori communities.

The following chapter establishes the ideological orientations and theoretical assumptions of this work, and provides details on the methodology and methods used to generate data relating to the research questions. The four-year-old children participating in this research are introduced, and the development and implementation of the intervention trialled in this work is discussed. This chapter also offers details on the processes of generating data, the timeline during which these occurred, and the means of analysing the various data sets produced in this work.

## **CHAPTER THREE: METHODOLOGY**

In Chapter Two, a review of literature relating to key influences in this work was presented, specifically the discourse pertaining to phonological awareness, key elements of oral language, bilingualism, Māori oral traditions and pedagogy, historical tribal experiences with literacy, and whānau literacy practices in the home. This review served to establish both a conceptual and contextual lens through which to view, examine, and interpret the data sets collected in this research, and also sought to shed light on the various dimensions that guided the development of the intervention trialled in this work. Moreover, this analysis culminated in generating the overarching research question, together with a secondary line of enquiry. Chapter Three continues that investigation by offering details as to how the researcher collected and analysed sets of data, which would produce some answers to the key questions explored in this thesis.

The first part of this chapter outlines the ideological orientations and theoretical frameworks applied in this work. Following this, details are provided about the methodological approaches employed in this research, particularly with regard to the models and frameworks used to guide the overall study, and develop the intervention. A description of the research setting is offered, and the children participating in the study are introduced. This chapter concludes by describing the intervention, in particular, specifying the resources that were developed for use in the intervention; outlining how the intervention was operationalised both in practical terms, and concerning the collection of data; and detailing the way in which the numerous series of data generated in this study were analysed.

### **3.1 Ideological Orientations**

Generally, it is expected that research involving Māori participants is located in a kaupapa Māori (Māori-centred) ideological orientation, and a kaupapa Māori approach to the research is employed, in which culturally responsive methods for engagement, data collection, and analysis are utilised (see Bishop, 1999; Walker, Eketone, & Gibbs, 2006). Kaupapa Māori research is not a method for gathering data in itself, but rather an approach to implementing research methods that generate

data (Derby, 2016), where the ensuing findings are necessarily shaped to accord with the prescribed ideological aims of kaupapa Māori (Derby & Moon, 2018).

Proponents of this approach assert that kaupapa Māori research is a critical part of the wider kaupapa Māori movement, which seeks solutions from within Māori cultural understandings (Bishop, 1999; Irwin, 1994). Smith (1996) offers a set of ‘culturally appropriate’, ethical guidelines that advise researchers on the ‘suitable’ process of engagement with Māori communities. These guidelines are seen as the cornerstones of kaupapa Māori research:

- Aroha i te tangata (respect others)
- Kanohi kitea (the seen face)
- Titiro, whakarongo...kōrero (look, listen...speak)
- Manaaki i te tangata (be generous)
- Kia tūpato, kua e takahia te mana o te tangata (do not make people feel inferior)
- Kua e māhaki (do not flaunt your knowledge)

While a kaupapa Māori approach has had a profound impact on the research landscape in New Zealand, particularly concerning collection and analysis of data, ensuring researchers are accountable to the communities with whom they are working, and encouraging researchers to be cognisant of a Māori cultural context, two key points arise from an analysis of this prescribed set of guidelines. Firstly, kaupapa Māori is unavoidably reliant on a set of assumptions about Māori cultural experiences – experiences which, in reality, are complex, multiple, fluid, and constantly emerging, but which, under a kaupapa Māori model of engagement, are reduced to a monolithic form devoid of social and cultural plurality (Derby & Moon, 2018). Employing a kaupapa Māori approach to research requires a commitment to a construct of ‘Māoriness’, which assumes a cultural uniformity that has never existed in practice, either historically or in contemporary times. Secondly, this template for engagement seems to suggest that these guidelines originate solely from Māori cultural understandings, and they are unique to Māori research and researchers. Is this the case, or is this type of engagement indicative of good research practice, irrespective of the ethnicity of those involved in the research? In this work,

the researcher did, in fact, utilise such guidelines when engaging with the participants, but, in doing so, suggests that this template describes largely universal values that offers an approach to research which ought to be applied in any research context.

Finally, like this study, kaupapa Māori research rejects studies with outcomes that solely point to inadequate Māori achievement (Tangaere, 2012), and instead advocates for research that operationalises self-determination by and for Māori communities (Bishop, 1999; Smith, 1999). Therefore, this aspect of kaupapa Māori research is aligned with a central theme of this study, namely self-determination. However, the findings presented in the following chapters have not been shaped to serve an ideological purpose, but rather have been viewed, analysed, and interpreted in a manner that is reflective of the unique reality of each participant. Furthermore, one of the overarching intentions of this work is that it remains accessible to whānau. Therefore, the data sets are also presented in such a way so as to facilitate readability and comprehension for those whom this study is relevant to. In summary, while a rigorous critique of a kaupapa Māori approach to research is beyond the scope of this work, in a study involving a Māori researcher and participants, the absence of any mention of kaupapa Māori as an ideological orientation or an approach to research would generate questions about the ‘cultural responsiveness’ of the work. However, like any good research practice, this study was conducted in an ethical manner, which was reflective of the multi-faceted contexts relative to each child, their whānau, and their lived reality.

### **3.2 Theoretical Framework**

This research employs two key theoretical approaches, specifically sociocultural theory, and ecological systems theory. A function of theory is to construct a framework within which various studies of phenomena can be viewed and interpreted (Mutch, 2005). The phenomenon explored in this research is literacy; more specifically, this study considers the relationship between literacy, the home environment, and bilingual (English and te reo Māori) four-year-old preschool children. An analysis of sociocultural theory and ecological systems theory, respectively, provides a conceptual lens through which to view and interpret literacy, and the interactions of this phenomenon with the aforementioned key considerations. In addition to this, these theoretical perspectives serve another

purpose in this study, which is that the researcher utilised them to guide the development of the intervention. Noting the salience of whānau to the development of an individual as articulated in both sociocultural theory and ecological systems theory, and the role whānau played in educating their children in traditional Māori society, which was discussed in Chapter Two of this work, the researcher decided to develop and trial a home-based literacy intervention, as opposed to an intervention conducted in primary schools or early childhood centres. Details of this intervention and its development are offered further on in this chapter. The following components of this section describe the aforementioned theoretical approaches, and the relevance they each hold in the context of this work.

### 3.2.1 Sociocultural Theory

Central to sociocultural theory is the idea that human development is socially situated – heavily influenced by context, history, and culture – and knowledge is co-constructed through interactions with others. Preeminent Russian psychologist, Lev Vygotsky was the first theorist to systematise and apply sociocultural approaches to learning and development (John-Steiner & Mahn, 1996; Macfarlane, 2015). Sociocultural theory offers an alternative to the strict demarcation of person from world proposed by seminal constructivist theorists Immanuel Kant and Jean Piaget (Packer & Goicoechea, 2000), and instead encourages a more holistic consideration, which emphasises the interdependence of social and individual processes in learning and development (John-Steiner & Mahn, 1996; McInerney, Walker & Liem, 2011).

Macfarlane (2015) notes “human activity and cognitive functioning do not occur in a vacuum” (p. 20), and contends that sociocultural approaches provide a lens, which enhances our understanding of both the relationship between cognitive functioning and social and cultural settings, and the nature of the interaction between social and cultural constructs. Burr (2003) argues that the ways in which we understand the world depends on where and when in the world we live, and Macfarlane (2015) concurs, observing that the principles and theories we use to understand the world are socially and culturally relative. Macfarlane adds that it is through regular interaction between people in social and cultural settings that knowledge is created and embedded, and that these settings are relative to different social and cultural worlds. John-Steiner and Mahn (1996) conclude that learning and development occur within human activities that unfold in cultural contexts, facilitated by

language and other symbol systems, and can be best understood when consideration is given to their historical development.

A key feature of Vygotsky's theory is the Zone of Proximal Development (ZPD), which Vygotsky (1978) defines as "the distance between the actual developmental level as determined through independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86). According to Vygotsky, learning occurs through activity in this zone, where the range is neither so difficult that the child gets frustrated nor too easy so that the child becomes disinterested. Brown (1992) and Brown et al. (1993) developed and implemented educational programmes based on the concept of the ZPD, suggesting that active agents within ZPD "can include people, adults and children, with various degrees of expertise, but it can also include artefacts, such as books, videos, wall displays, scientific equipment and a computer environment intended to support intentional learning" (Brown et al., 1993, p. 191). Expanding the ZPD to include artefacts is a significant point to note in the context of this work because this research uses books as artefacts to support the learning and development of the four-year-old children participating in the study.

Palincsar, Brown and Campione (1993) note another important feature of the studies conducted by Brown (1992) and Brown et al. (1993), specifically their consideration of the way in which:

Divergent classrooms can become learning communities – communities in which each participant makes significant contributions to the emergent understandings of all members, despite having unequal knowledge concerning the topic under study.... They examine the role of reciprocal teaching [where] students and teachers take turns leading discussions about shared text. (p. 43)

This approach has resonance with the Māori concept of 'ako', which Williams (1975) defines as "meaning both 'learn' and 'teach'" (p. 7). Metge (2015) notes "in English, 'learning' and 'teaching' are distinguished as separate activities. In Māori the two are encompassed in the word 'ako'" (p. 7). At this point, it is necessary to stress that Māori ideas concerning the reciprocal nature of learning and teaching, which are captured in the concept of ako – whereby a "unified co-operation of learner and teacher in a single enterprise" (Metge, 1983, p. 2) occurs – are crucial to this study. Ako manifests in the interdependent and evolving interactions between the researcher, the whānau, and the children, all of whom simultaneously hold the role

of both teacher and learner, and work together towards various common goals associated with this work.

### *Applying the theory to case study*

John-Steiner and Mahn (1996) contend that literacy acquisition has long been a central concern of sociocultural theory. Vygotsky (1978) argues that “teaching should be organized in such a way that reading and writing are necessary for something... and that the natural methods of teaching reading and writing involve appropriate operations on the child's environment” (p. 117-118). Vygotsky’s considerations have had significant influence on more recent sociocultural approaches to literacy development for children in primary school, home, and early childhood settings (Clay & Cazden, 1990; Glynn, Wearmouth & Berryman, 2006; John-Steiner, Panofsky, & Smith, 1994; Kusleika, 2014; McNamee, 1990; McNaughton, 2002; Scribner & Cole, 1981; Tangaere, 2012; Zebroski, 1994). However, this study focuses more specifically on the role of whānau in supporting children’s emerging literacy, and a large body of research sheds light on this phenomenon. Examples include a study by Panofsky (1994) in which she explores the impact of parent-child book reading in early literacy socialisation with a focus on the functions and uses of language. Similarly, Kusleika (2014) examined the role and nature of parental support in children’s early literacy development. Weigel et al. (2005) adopted a more holistic approach, and compared the influence of the home and preschool literacy environments on children’s emerging literacy.

At a local level, in New Zealand, Salmon and Reese (2016) investigated the role parents play in stimulating oral language development, which is widely recognised as a critical skill in literacy acquisition (Justice & Pence, 2005; Kusleika, 2014; Reese, Suggate, Long & Schaughency, 2010; Salmon & Reese, 2016), and Reese and Neha (2015) focused specifically on interactions between mothers and children in Māori whānau which support children’s emerging literacy. Sociocultural theory is applied in this study to examine the interplay between the social and cultural context of a child, their whānau, and their emerging literacy. This study engages specifically with Māori whānau and children, and for this reason, sociocultural theory is deemed an appropriate lens through which to view and interpret this environment, and the interactions that occur within it. John-Steiner and Mahn (1996) contend that when children begin primary school, they arrive with a foundation that is shaped by the

nature of the interactions in their respective social and cultural worlds. Sociocultural theory considers the influence of cultural settings on cognitive functioning, and also, by way of ZPD, recognises the salient role of whānau as key contributors to children’s emerging literacy.

### 3.2.2 Ecological Systems Theory

Vygotsky’s seminal ideas about the interdependent relationship between cognitive functioning, and social and cultural settings was expanded on by Bronfenbrenner (1979) with his ecological systems theory concerning human development, whereby an environment is conceived as a set of nested structures, each inside the next like concentric circles. Fig. 1 depicts Bronfenbrenner’s Ecological Systems Theory Model as it is applied in this work.

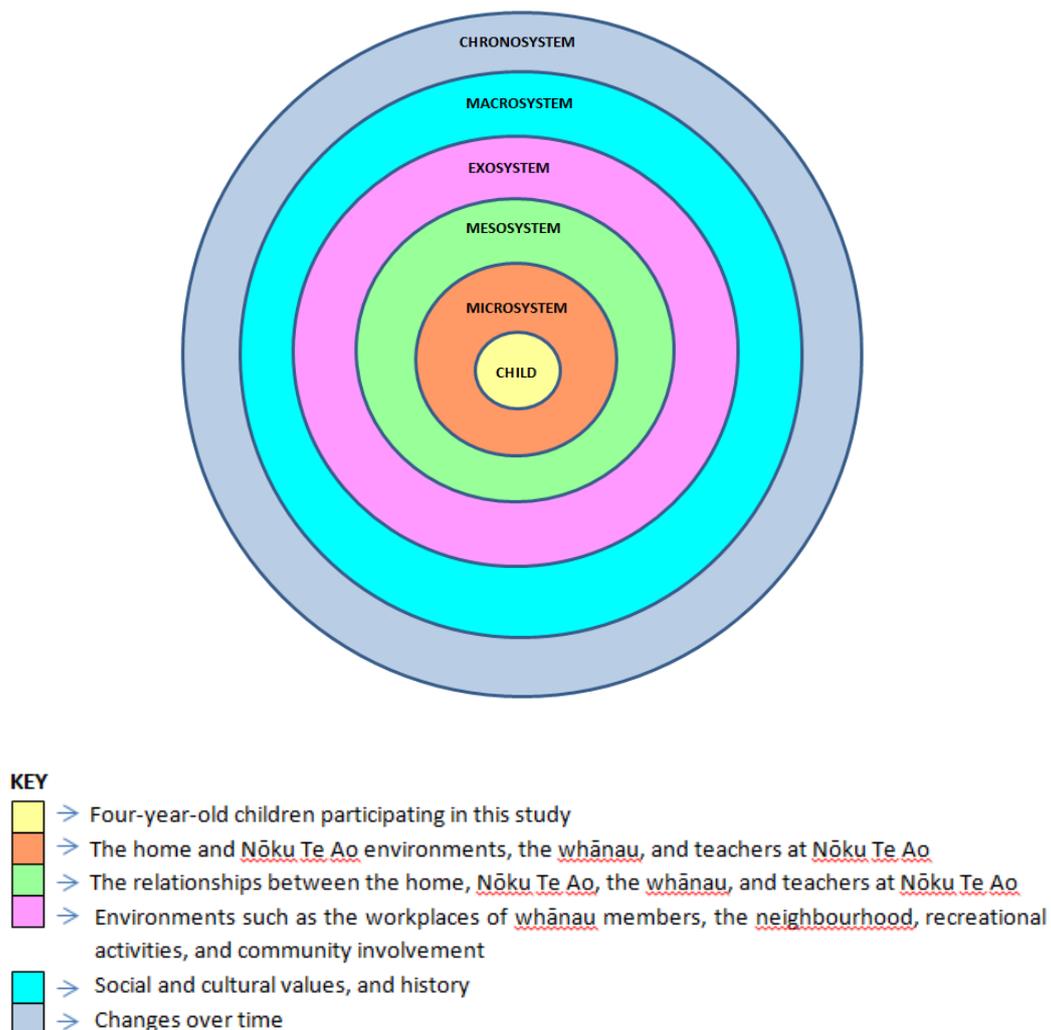


Figure 1. Ecological Systems Theory applied to this case study

Ecological systems theory contends that human development is influenced by external factors which impact on an individual at personal, educational, community, or societal levels. Bronfenbrenner categorises these systems according to their proximity to the child's environment. Located in the innermost circle is the child, or the developing person, including key characteristics about the child such as their sex, their age, and their health. In closest proximity to the child is the Microsystem. In this context of this study, the Microsystem includes the home and the early childhood centre, together with whānau and teachers as key players in those respective environments.

Moving out one space, the Mesosystem considers the relationships between the Microsystems in an individual's life, and Bronfenbrenner argues that these interconnections can be "as decisive for development as events taking place within a given setting" (p. 3). Expanding wider still, the Exosystem is the setting in which there is a link between the context where an individual does not have any active role, and the setting in which an individual is actively participating. Bronfenbrenner hypothesises that an individual's development is profoundly affected by events occurring in environments in which they may not be present. In this work, the Exosystem may include, but is not limited to, the workplaces of whānau members, the neighbourhood, recreational activities, and community involvement. The Exosystem is not a point of focus in this study, although these systems must be acknowledged as having the potential to influence the child.

The Macrosystem considers political, social, historical, and educational systems, and their influence on each child, as well as the striking phenomenon of culture, or the overarching values and beliefs, of an individual – a phenomenon that pertains to each of the systems described above. Bronfenbrenner argues:

Within any culture or subculture, settings of a given kind – such as homes, streets, or offices – tend to be very much alike, whereas between cultures they are distinctly different. It is as if within each society or subculture there existed a blueprint for the organization of every type of setting. Furthermore, the blueprint can be changed, with the result that the structure of the settings in a society can become markedly altered and produce corresponding changes in behavior and development. (p. 4)

What is evident from this extract is that it is critical to consider the significance of culture on an individual's development. Paying attention to culture is particularly relevant in the context of this study because the children and whānau participating are of Māori descent, and this requires a consideration of culture beyond a typical

hegemonic Western worldview to that of Te Ao Māori, and its influence on the research participants.

Finally, the Chronosystem is concerned with the dimension of time, specifically the influence of both change and constancy in the child's environment. The Chronosystem can include key transition points such as changing schools, graduation, marriage, divorce, and death in the family (Tangaere, 2012). Bronfenbrenner (1986) says "such transitions occur throughout the life span and often serve as a direct impetus for developmental change" (p. 724). This study examines emerging literacy in four-year old children, who are in their last year of early childhood education, and, shortly after the intervention concludes, will have made the significant transition into primary school. Therefore, reflecting on the impact of transition events on a child's development has resonance with this study. In summary, Bronfenbrenner's ecological systems theory requires cogitation of the evolving and fluid interactions of many influences on a child's development, which occur in a complex system of relationships and social environments.

#### *Applying the theory to the case study*

When investigating the development of the child, Bronfenbrenner (1979) recognises the importance of a child's two major immediate settings, or Microsystems, namely the home and the educational context. Tharp (1989) argues that the more the values, beliefs, and practices are compatible between these two settings, the more likely the learning and development of each child is optimised. Tangaere (2012) applied ecological systems theory in her study examining Māori language development in Kōhanga Reo (Māori immersion early childhood centres) and the home, and specifically looks at the Mesosystem – that is, the relationship between the home and the Kōhanga Reo. The study found that cultural compatibility between the two Microsystems – the home and the Kōhanga Reo – helps to forge and strengthen relationships between those settings. Similarly, others note that synergy between the home and school environment contributes positively to children's learning and language development (Hopeha, 1990; Reedy, 2003; Skerrett-White, 2003).

Weigel et al. (2005) applied ecological systems theory in a study examining literacy development in young children, arguing that there is a need to examine the link between children's environments and their developmental outcomes. They note that literacy does not emerge in isolation for young children, but rather it takes place in

a rich context of direct and indirect influences. Weigel et al. found that young children's literacy and language skills appear to be stronger when the habits, activities, and beliefs in the home and early childhood environments are aligned. In other words, when whānau and teachers model good literacy habits, provide enriching activities, and have supportive beliefs about early literacy development children's learning is amplified. McNaughton (1995) concurs, and, following a study exploring the development of literacy skills in primary school-age children, it is his contention that situations in which the home and school literacy environments complement each other are best for fostering children's literacy and language development. Similarly, Baker et al. (1997) and Snow et al. (1991) applied ecological systems theory in their respective studies examining the relationship between the home and school settings, and both found that when there is a strong alliance between home and school environments, children are more likely to be successful in acquiring literacy and language skills.

In summary, a key principle of ecological systems theory is the importance of studying the contexts of children's experiences, and investigating the relationships between these contexts. This study primarily examines the relationship between a child and their whānau; therefore, ecological systems theory is an appropriate lens through which to view and interpret the influence of the respective whānau settings on the children and their emerging literacy. Furthermore, this study gives attention to the complex system of relationships and social environments which include the child, their whānau, and the early childhood centre the children attend, together with the influence of political, educational, social, and, in particular, historical phenomena, to determine the impact of these converging systems on the emerging literacy of the children participating in the study. The consideration of nested systems provided for by ecological systems theory allows for the examination of multiple environments and factors, how they relate with one another, and how they influence the children and their literacy development. Therefore, ecological systems theory is applied in this study to elicit some understanding of how children's whānau, the early childhood centre, and historical, social, and political factors at the Macrosystem level connect to influence children's emerging literacy.

### **3.3 Methodological Approaches**

The following sections outline the methodology used in the study, and provide details on the approach, design, early childhood centre, participants, the intervention trialled in this work, data collection methods and analysis, and the resources developed to support the research. These sections also serve to highlight the contribution this study makes to Māori self-determination. It was noted in Chapter One that Indigenous groups worldwide are moving away from Western-centred programmes that promote literacy within their communities, and are instead employing a ‘ground up’ approach to literacy, where programmes and practices are informed by Indigenous epistemologies, and are directed by Indigenous groups themselves. These programmes are embedded in self-determination, and act as a vehicle which fosters access to the multitude of human rights associated with literacy. With this in mind, the literacy intervention trialled in this study was co-constructed by the researcher and the community, is informed by Māori epistemology, pedagogy, and history, and takes a ‘ground up’ approach to programme implementation, delivery, and evaluation.

#### 3.3.1 He Awa Whiria Model

It has been acknowledged that this study is located in an ethical and responsive framework, and that sociocultural theory and ecological systems theory are employed as lenses through which to view and interpret the data generated in this research. At this juncture, it is timely to give attention to He Awa Whiria (Braided Rivers) model, and the critical contribution it makes to the methodology employed in the study. Essentially, He Awa Whiria is an innovative model that draws inspiration from Indigenous and Western streams of knowledge (Macfarlane, Macfarlane, & Gillon, 2015). Macfarlane et al. propose that:

Western knowledge and theory, although fundamentally sound, are culturally bound, and are therefore not able to be transferred directly into another (Indigenous Māori) culture. It is therefore necessary to make a plea for an interdependent and innovative theoretical space where the two streams of knowledge are able to blend and interact, and in doing so, facilitate greater sociocultural understanding and better outcomes for Indigenous individuals or groups. (p. 52)

Two key suggestions are evident in this extract. Firstly, Macfarlane et al. suggest that it is culturally inappropriate to seek solutions to Indigenous challenges solely

from within Western knowledge streams, and secondly, they propose that a blending of Indigenous and Western bodies of knowledge creates an approach that is more powerful than either knowledge stream is able to produce unilaterally.

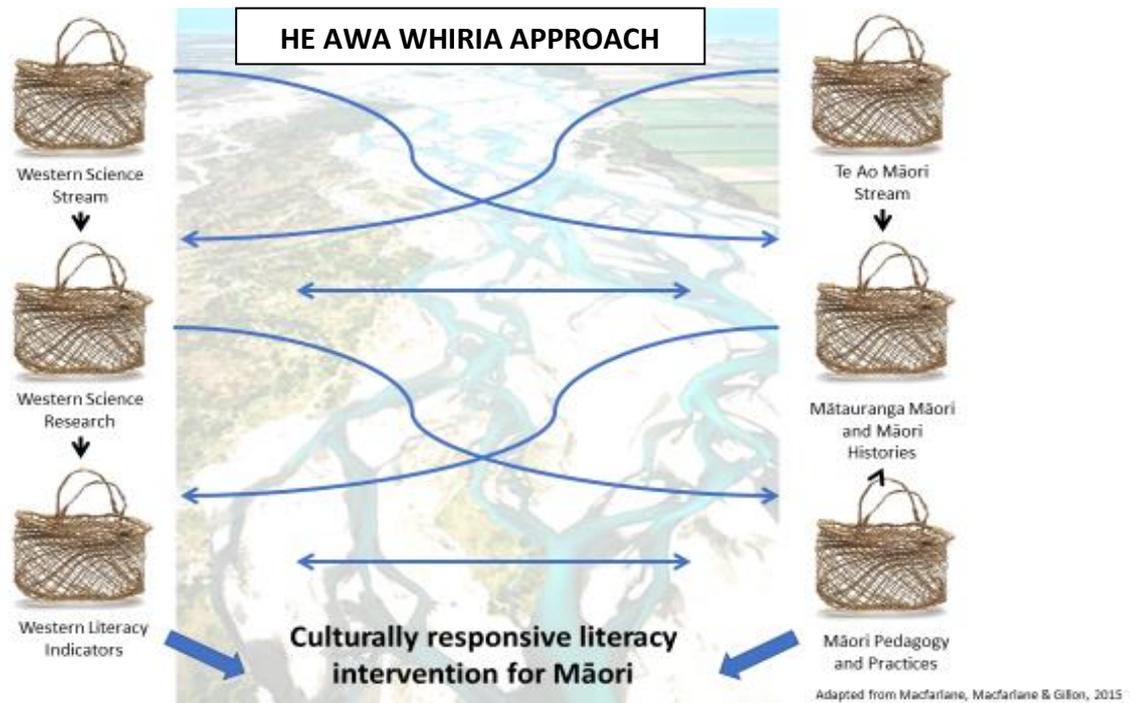


Figure 2. A Braided Rivers Approach to a culturally responsive literacy intervention for Māori

Fig. 2 provides a visual interpretation of He Awa Whiria model, which the researcher adapted to fit the context of this study. The kete (baskets) under the Western stream refer to the corpus of research concerning the cognitive skills associated with early literacy, those being phonological awareness, and elements of oral language. The kete under the Māori stream represent key cultural considerations in this study, specifically Māori oral traditions, epistemology, and pedagogy, and historical interactions of iwi and hapū with literacy. It is unlikely that one stream on its own would generate robust outcomes for Māori learners in the area of literacy acquisition. However, blending these streams provides a solid foundation on which to develop a culturally responsive literacy intervention for Māori learners, which draws from Western research concerning the cognitive skills associated with early literacy while still ensuring cultural factors play a central role in supporting the literacy development of Māori children.

In this study, He Awa Whiria model, together with sociocultural theory and ecological systems theory, was applied to guide the development of the intervention trialled with the participants by drawing from Western research on phonological awareness and aspects of oral language, while at the same time ensuring Māori epistemology and pedagogy have an authentic and natural presence in the intervention at each stage of its development, implementation, and evaluation. The following section provides details on the embryonic stages of the intervention.

### 3.3.2 Cultural Enhancement Framework and Te Pihinga Intervention

In order to give life to He Awa Whiria model, the researcher utilised Macfarlane and Reweti's (2011) Cultural Enhancement Framework (CEF), which is a tool used to guide the cultural enhancement of Western interventions for use with Māori. The CEF was initially developed to enhance the Incredible Years programme (see Webster-Stratton, 1994). The CEF focuses on the 'Why, Who, What, How and Where' of intervention implementation, and is responsive to the overarching principles of the Treaty of Waitangi – those being partnership, protection, and participation. A key feature of the CEF is that it must be used in partnership between Māori and non-Māori. The intention is that these two parties employ a collaborative approach to enhancing an intervention that is Western in its origins so that it is appropriate for use with Māori communities at its various stages.

During the course of exploring the current research on home-based literacy interventions that are driven by whānau, the researcher encountered Te Pihinga intervention (see Schaughency et al., 2014), which uses children's books as artefacts to stimulate conversations that foster development in phonological awareness and aspects of oral language. Te Pihinga intervention was originally developed for parents to run in the home, and it was later adapted primarily for home-based educators. The intervention has two key parts: Rich Reading and Reminiscing (RRR), which focuses on developing skills in oral language, and Stimulating Sound Sensitivity (SSS), which aims to enhance children's phonological awareness abilities. RRR encourages a move away from an 'adult reads, child listens' approach to storytelling, and instead proposes an interactive style that turns a storybook into a conversation. This method helps children to learn new vocabulary, to understand connections between events, to better understand their emotions, and to tell better stories themselves. SSS urges whānau

to point out and play with the sounds in words during shared book reading. This helps children understand that words are made up of smaller units of sound which can be manipulated, thus stimulating their phonological awareness skills.

With its focus on conversations and storytelling practices that occur within whānau, the researcher identified the resonance Te Pihinga has with Māori pedagogy and oral traditions. The researcher approached its creators to gauge their interest in working collaboratively to adapt the intervention for use in this study. Their consent was granted, and following this, the researcher, together with Macfarlane (CEF lead author) and the creators of Te Pihinga intervention, met face-to-face in a one-day wānanga (in this instance, best interpreted as ‘workshop’) to culturally enhance Te Pihinga intervention for use with Māori whānau and children.

The next step was to take the adapted version of the intervention to the leaders of the early childhood centre to co-construct key aspects of it prior to its implementation, and the commencement of the various data collection phases of this study. After conversations with the creators of Te Pihinga intervention, and the directors of the early childhood centre, the following modifications to the intervention resulted, which are depicted in Table 1.

<b>Original Intervention</b>	<b>Adapted Version</b>
Storybooks, resources, and communication documents produced in English	Incorporation of storybooks, resources, and communication documents in te reo Māori
Western-centred activities and pedagogical approach	Alignment to Māori oral traditions, such as the use of waiata and pūrakau
Intervention primarily delivered by home-based early childhood providers	Adapted version delivered solely by whānau in their home
Intervention focuses on early literacy in English	Adapted version focuses on early literacy in English and te reo Māori
English words and phrases used to encourage participation and to praise children for their efforts	Common te reo Māori words and phrases used to encourage participation and to praise children for their efforts
Use of Western-inspired artefacts with participants	Use of cultural artefacts <sup>18</sup> that are reflective of Te Ao Māori

*Table 1: Cultural Enhancement of Te Pihinga Intervention*

The adapted version of the intervention was named ‘He Poutama Mātauranga’ to reflect the oral tradition in which Tāne-o-te-Wānanga ascended to the uppermost realm in his quest for superior knowledge<sup>19</sup>. A ‘poutama’ is a stepped pattern of panels and woven mats that symbolises both genealogies, and the various levels of learning and intellectual achievement (Moorfield, 2018), and ‘mātauranga’ in this context is best interpreted as knowledge, wisdom, understanding, and skill (Moorfield, 2018). Therefore, He Poutama Mātauranga reflects a quest for knowledge and also, by way of a series of steps, illustrates the cumulative nature

<sup>18</sup> An example of a cultural artefact used in this research is flax kete. Each child was given a woven kete with their name on it to carry their books, and to keep their certificates safe. This was also designed to help whānau by ensuring resources related to their weekly activities were able to kept in one place.

<sup>19</sup> Tāne, the progenitor of humankind, of the forests and all the creatures of the forest, ascended through the twelve heavens to the uppermost realm and obtained the three baskets of knowledge named Te Kete Tuauri, Te Kete Tuatea, and Te Kete Aronui. Tāne returned to Earth with the knowledge, and, once there, created humankind from the Earth (Walker, 1990).

of the skills the intervention promotes. He Poutama Mātauranga is described in detail further on in this chapter.

### **3.4 The Research Setting**

This study involves Nōku Te Ao<sup>20</sup>, which is a dual language early childhood centre located in Christchurch, New Zealand, catering to children aged 0-5 years. The centre has two sites – one in Mairehau and one in Linwood. The first site was opened in 2002 in response to a growing population of young children in Te Ahikaaroa Kapa Haka (Māori performing arts) group. The members of the group decided to start their own centre, which reflected their cultural values and educational aspirations for their children.

Nōku Te Ao, meaning ‘the world is mine’, places tino rangatiratanga, or self-determination, at the heart of their centre, embedding it in their philosophy and in their teachings. In 2015, the Māori Language Commission Te Taura Whiri i te Reo Māori awarded Nōku Te Ao the Ngā Tohu Reo Māori Award, which acknowledged the centre’s contribution to Māori-medium education. Additionally, in 2014, Nōku Te Ao was the recipient of a Prime Minister’s Education Excellence Award, the Awatea Award, in recognition of excellence in governing. Following the receipt of these awards, a second site was opened in 2015.

Nōku Te Ao is a dual language centre, meaning the teachers engage with the children in both English and te reo Māori. In October, 2017, the researcher undertook observations at each site in order to determine how a typical day unfolds at the centre. The following discoveries were made. Books are not displayed at either site, however the tuakana (seniors – aged three years or over) are read to some days by teachers during wā whakatā (rest time). The teachers engage the children in singing throughout the day, and many of these songs are waiata ringa, and involve physical actions. The vast majority of songs, as well as all karakia recited by the children before various activities occur, are in te reo Māori. Despite being a dual language centre with a strong commitment to te reo Māori, the children hear predominantly English, and converse with other children and centre staff in English the majority of the time. The bulk of their exposure to te reo Māori comes in more ceremonial or instructional forms, via songs, karakia, games, kapa haka,

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<sup>20</sup> Consent was sought, and granted by the centre manager, to name Nōku Te Ao in this work.

mihimihi, and commands given to the children by centre staff. Despite the existence of two sites, there was little difference between the daily activities that occurred in each place.

This study recruited children from both sites of Nōku Te Ao in recognition of their status as one whānau. The researcher, whose son attends Nōku Te Ao and consequently, she is a member of the Nōku Te Ao community, together with her doctoral supervisors, extended an invitation to the Nōku Te Ao centre manager and members of the Board of Trustees to meet at the University of Canterbury. The purpose of this meeting was to formally invite Nōku Te Ao to participate in the research project, and to provide some information to the meeting attendees, which was designed to assist them with making an informed decision regarding their involvement. Following their agreement to participate in the project, the researcher collaborated with the centre manager and the Board of Trustees during the initial stages of developing the intervention, and met with the centre manager on a weekly basis during the numerous data collection phases of the intervention. Resources developed for use in the intervention were not included without prior approval from the centre manager, who had been provided with a mandate by the Board of Trustees to oversee the research in Nōku Te Ao.

At each site, the centre manager provided the researcher with a quiet office space in which to conduct the pre-, mid-, and post-intervention phases of data collection. The six-month follow up data collection phase was undertaken in the homes of the children, because they had each started primary school by this time. The researcher also held whānau interviews, conducted the pre- and post-intervention questionnaires, and collected reading samples from whānau in their homes. The following section draws from some of the data gleaned during the interviews, and introduces the children who participated in the research.

### **3.5 About the Participants**

This study engages with four-year old children attending Nōku Te Ao, and their whānau. The two criteria for selection were that children were four years of age for the duration of the intervention, and that they attend Nōku Te Ao. An invitation was extended via the centre manager to whānau who had a four-year-old child attending Nōku Te Ao (see Appendix 1), along with an information sheet (see Appendix 2) and a consent form (see Appendix 3). Both the information sheet and

the consent form were provided in English and te reo Māori. Eight whānau in total agreed to participate in the study, with seven accepting the invitation in the initial round of communications, and one whānau providing their consent in a follow up set of invitations sent to those whānau whose child had only recently turned four, and consequently did not receive an invitation in the first instance.

The final cohort of research participants consists of six girls, and two boys. The researcher invited whānau members to participate in a semi-structured interview in the pre-intervention phase of the study, and the data sets generated by these interviews are used to introduce each child below. The interview questions, which acted as a prompt to guide conversations, are included in Appendix 4. During this phase of data collection, whānau also completed a pre-intervention questionnaire (see Appendix 5), which explored literacy practices in the home environment. In addition to this, whānau provided information concerning their child's health, the languages their child is able to understand or converse in, the educational experiences of the mother, and the child's tribal and ethnic affiliations. The findings of both the pre- and post-intervention questionnaires are presented in Chapter Four. And finally, the researcher collected a reading sample with whānau in which a whānau member (in each case, it was the mother of the child who completed this task) read a pre-selected story to their child. The details of these books are included later in this chapter. Using data sets generated by the interviews and pre-intervention questionnaire the researcher conducted with whānau, the following children participated in the research:

### 3.5.1 Atawhai

Atawhai is of Te Atiawa descent on her father's side, and Pākehā descent on her mother's side. She started at Nōku Te Ao when she was two years old, and at the same time, Atawhai's mother started a te reo Māori course in order to support Atawhai in acquiring the language. Atawhai's mother was raised in rural Canterbury, and did not have the opportunity to learn te reo Māori at school. Atawhai's mother identifies secondary school as her highest level of education.

Atawhai presents with no medical concerns. In her home environment, she is exposed to the English language 90 per cent of the time, and to te reo Māori for the

remaining 10 per cent<sup>21</sup>. At this stage, her Māori language engagement mostly consists of greeting and farewelling people, introducing herself to others, using nouns to identify particular objects, and singing songs. Atawhai's mother notes it is 'quite important' for their whānau to maintain these languages in their home.

### 3.5.2 Tia

Tia affiliates to the Ngāpuhi iwi on her mother's side, and has Tongan ancestry on her father's side. She started at Nōku Te Ao when she was two years old. Her mother completed her secondary schooling in the Bay of Islands, and did not have the opportunity to learn te reo Māori at school. However, Tia's mother was exposed to the language in her home environment. Tia's mother identifies secondary school as her highest level of education.

Tia presents with no significant health issues. In her home environment, Tia is exposed to three languages – English, te reo Māori, and Tongan, which she is immersed in 60 per cent, 30 per cent, and 10 per cent of the time, respectively. Tia's current use of te reo Māori mostly consists of greeting and farewelling people, using nouns to identify particular objects, and singing songs. She also recognises when it is relevant to use the language. Tia's mother identifies it is 'quite important' that these languages are maintained in their home.

### 3.5.3 Kahu

Kahu has connections with the Tuhourangi iwi of the Te Arawa confederation, and he started at Nōku Te Ao when he was one year old. Kahu's mother grew up in the Waikato region, and was exposed to very little te reo Māori during her school years. However, she enrolled as an adult student at Hagley Community College in Christchurch, and following this course, she completed further studies in te reo Māori at what was then known as the Christchurch Polytechnic Institute of Technology. Kahu's mother identifies this programme as her highest level of education.

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<sup>21</sup> The percentages described in these series of data were estimated by the mothers who completed the pre-intervention questionnaire (see Appendix 5).

Kahu does not have any medical challenges. In his home environment, he is exposed to English 80 per cent of the time, and to te reo Māori for the remaining 20 per cent of the time. Currently, his use of the Māori language mostly relates to greeting and farewelling people, using nouns to identify particular objects, and singing songs. He also uses and responds to simple sentences, phrases, and instructions. Kahu's mother remarks that it is 'quite important' to maintain these languages in their home environment.

#### 3.5.4 Moana

Moana descends from the Ngāti Tūwharetoa and Te Atihaunui a Pāpārangi iwi on her mother's side, and is Pākehā on her father's side. She started at Nōku Te Ao when she was two years old. Moana's mother grew up in Lower Hutt, and did not learn te reo Māori at school. When Moana started at Nōku Te Ao, her mother volunteered as a relief teacher in order to learn te reo Māori, and support Moana in her acquisition of the language. Moana's mother has a Bachelor of Science in Zoology, which is her highest level of education.

Moana presents with no health conditions. She is exposed to three languages in her home environment, those being English, te reo Māori, and Japanese, which she hears 93 per cent, five per cent, and two per cent of the time, respectively. At this stage, Moana's use of te reo Māori mostly consists of greeting and farewelling people, recognising when it is relevant to use the language, using nouns to identify particular objects, responding to simple sentences, phrases, and instructions, and singing songs. It is 'very important' that these languages are spoken and heard in their home.

#### 3.5.5 Ana

Ana affiliates to the Te Atihaunui a Pāpārangi, Whakatōhea, and Tūhoe iwi. Her mother is a teacher at Nōku Te Ao, and Ana started there when she was ten months old. Ana's mother grew up in Christchurch, and learnt some te reo Māori at school. However, Ana's father is a te reo Māori secondary school teacher, therefore she is immersed in the language when she is in his home. Secondary school is the highest level of education for Ana's mother.

Ana does not have any significant medical concerns. In her home environments, she is immersed in English 90 per cent of the time, and in te reo Māori the remaining 10 per cent of the time. Currently, Ana's engagement with te reo Māori mostly relates to greeting and farewelling people, recognising when it is relevant to use the language, using nouns to identify particular objects, and singing songs. Ana's mother notes it is 'very important' that both English and te reo Māori are spoken and heard in their home.

### 3.5.6 Tama

Tama is of Ngāi Tahu, Waikato Maniapoto, Te Ati Haunui-ā-pāpā, and Tūwharetoa descent on his father's side, and Pākehā descent on his mother's side. He started at Nōku Te Ao when he was one year old. Tama's mother grew up on the West Coast of the South Island, and did not have any opportunities to learn te reo Māori at school. However, she learnt the language during her university studies. Tama's mother has a Master of Arts degree, which is her highest academic qualification.

Tama presents with no medical issues. In his home environment, he is exposed to English 90 per cent of the time, and to te reo Māori 10 per cent of the time. At this stage, his Māori language engagement mostly consists of greeting and farewelling people, recognising when it is relevant to use the language, using nouns to identify particular objects, using and responding to simple sentences, phrases, and instructions, and singing songs. It is 'very important' these languages are maintained in their home environment.

### 3.5.7 Hine

Hine is of Tūhoe and Ngā Rauru descent on her mother's side, and Samoan descent on her father's side, and started at Nōku Te Ao when she was 15 months old. Hine's mother was raised in North Canterbury, and, together with friends at high school, petitioned the school to teach the language. Their requests were met first with classes held during lunchtime, then with a correspondence option, and finally with a permanent, on-site teacher. After she finished high school, Hine's mother continued to learn te reo Māori in both formal and informal settings. She enrolled in various language courses, and found employment in a Kōhanga Reo, where she had ample opportunity to speak the language on a daily basis. She continued to

progress with her te reo Māori qualifications, and after leaving her position at the Kōhanga Reo, she taught te reo Māori at several primary and intermediate schools in Christchurch.

Hine does not have any medical challenges. In her home environment, Hine is immersed in three languages, specifically English, te reo Māori, and Samoan, 70 per cent, 20 per cent, and 10 per cent of the time, respectively. Her current use of te reo Māori mostly relates to greeting and farewelling people, introducing herself to others, recognising when it is relevant to use the language, using nouns to identify particular objects, using and responding to simple sentences, phrases, and instructions, and singing songs. Hine's mother reported that her daughter "understands when people talk to her in te reo Māori but chooses to respond in English." She also notes it is 'very important' to their whānau that these languages are a prominent feature in their home.

#### 3.5.8 Aroha

Aroha affiliates to the Ngāti Wairere iwi on her mother's side, and to the Ngāi Tahu iwi on her father's side, and started at Nōku Te Ao when she was two years old. Aroha's mother was born in Motueka but did the majority of her schooling in Christchurch. She had little opportunity to learn te reo Māori at school, and left at the age of 16. She returned to study later, completing a Health and Fitness course, which is her highest academic qualification. Aroha's father incorporates te reo Māori words and phrases into his everyday vernacular, and this inspired Aroha's mother to do the same.

Aroha does not present with any medical concerns. In her home environment, she is exposed to English 80 per cent of the time, and to te reo Māori for the remaining 20 per cent. Currently, her Māori language engagement mostly consists of greeting and farewelling people, recognising when it is relevant to use the language, using nouns to identify particular objects, and singing songs. It is 'very important' for these languages to be spoken and heard in their home.

Some common experiences emerge across this cohort of participants, and their whānau. All of the children started at Nōku Te Ao when they were two years old or younger, and none of them have any medical challenges. Their mothers all had to learn te reo Māori as adults, with only two of them exposed to any level of te reo

Māori during their school years, or in their home. Consequently, English is by far the dominant language for all of the children, with the vast majority of them being exposed to English 80 per cent of the time or more. The ability of the children to converse in te reo Māori has not yet reached a conversational level of proficiency. Three of the children hear or speak a third language in their home, those languages being Japanese, Tongan, and Samoan. Every whānau reported it was 'quite important' or 'very important' to maintain the various languages in their homes. The relatively small number of participants in this study is best suited to a single case design. The following section offers details on this approach, and the way in which it is applied in this research.

### **3.6 Research Design**

Single case designs have been utilised in a number of disciplines, including research in the broad field of education (Kazdin, 1982). Riley-Tillman and Burns (2011) note single case design essentially documents three things, specifically:

1. If there is an observable and important change in a dependent variable,
2. If the observed change in the outcome data post application of the independent variable is a result of the application of the independent variable, and
3. If this change is something that is able to be generalised across time, setting, and target.

In this study, the dependent variables are phonological awareness, aspects of oral language, and literacy practices in the home environment. The independent variable is the intervention trialled in this work, where the purpose of this pilot is to determine its effect on the dependent variables. A qualitative approach is used in this research, with both quantitative and qualitative data revealing the effects of the intervention, both on the aforementioned dependent variables, and on the home literacy environment in general, respectively (see Denzin & Lincoln, 2017).

Data sets pertaining to one of the dependent variables, specifically the phonological awareness skills of each child, are presented in Chapter Five. These sets are depicted in graphs, with a two standard deviation band method (see Nourbakhsh & Ottenbacher, 1994) statistically validating the data, and the effects of the intervention. The points plotted on each graph are averages of repeated assessment

measures, where three test occurrences were conducted pre- and post-intervention, and two were carried out mid-intervention. Data concerning the level of aspects of the oral language skills each child possesses are described in Chapter Six, where the replication of the study with the eight children involved allowed for patterns to emerge in the data from which conclusions could be drawn (Morse, Barrett, Mayan, Olson, & Spiers, 2002). The oral language samples collected with each child were transcribed, and coded (see Miller, Gillon, & Westerveld, 2017). Following this, the Systematic Analysis of Language Transcripts Instructional Version 18.3.2 (SALT) tool was used to assess the spoken language samples of each child. Series of qualitative data collected by the researcher provide insight into the unique home environment of each child, as well as whānau experiences with and changes caused by the intervention. Themes emerged from these data sets in an inductive manner, which is reflective of the importance of participant voice and experiences occupying a central role in research. These data sets were used to introduce the children earlier on in this chapter, and aspects of these sets of data are also presented in Chapter Four of this thesis. Methods for analysing the remaining series of data are presented in Section 3.9 of this chapter. The following section describes the intervention trialled in this work.

### **3.7 He Poutama Mātauranga**

The inception of He Poutama Mātauranga was outlined earlier on in this chapter, and this section provides insight into the establishment of the intervention, as well as the activities and resources used in this work. The first portion of this section explains how the cohorts of participants were created. It also provides details on the various activities the children and their whānau engaged with prior to the intervention commencing. Following this, the resources used in the intervention are outlined, along with details on what occurred during the intervention, and how the intervention was operationalised.

#### 3.7.1 Pre-intervention Tasks

The eight children participating in this research, together with their whānau, were randomly assigned to the intervention sequence, and were sorted into two groups

of four. The first cohort completed the SSS<sup>22</sup> part of the intervention, while the remaining four participants focused on activities associated with RRR<sup>23</sup>. This study employed a crossover design, where one group completed the RRR portion of the intervention while the other group completed the SSS part. In keeping with Te Pihinga intervention, both the RRR and SSS components of the intervention ran for six weeks each. The crossover design allowed for a control to be established in the study, which increased the rigour of the findings. There was a two-week break in between the group changeover, where data sets were gathered in order to determine any shifts that may have occurred as a result of the RRR and SSS activities. This point in the research is referred to in this work as ‘mid-intervention’. Details about data collection processes are outlined further on in this chapter. Following the mid-intervention break, the groups switched, and completed the other portion of the intervention.

Prior to the intervention commencing, an invitation was extended to whānau members to participate in either an RRR or an SSS workshop, both of which were designed to explain how to conduct the activities associated with each component of the intervention. In every case, despite the invitation being open to all members of a whānau, it was the mother of each child who attended the workshops. Each workshop ran for approximately two hours, and took place in Te Rū Rangahau Māori Research Laboratory, at the University of Canterbury. Food and refreshments were provided. Each workshop followed the same format, with the content differing depending on if the focus of the workshop was RRR or SSS.

The researcher delivered a presentation to the attendees, which essentially outlined why RRR or SSS is important to fostering good language skills in preschool children, and how whānau were to engage with, and record the activities they participated in during the intervention. Whānau were given the opportunity to ask questions, and, at the end of the respective workshops, they were provided with tip sheets to take home to prompt them with regard to their role in the intervention (see Appendices 6 and 7). The next part of this section describes the resources

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<sup>22</sup> SSS was named ‘Ata Whakarongo ki te Tangi a te Manu, Tui, Tui, Tuia’, which reflects the focus on sounds in words, integral to the activities associated with this part of the intervention. However, for the sake of brevity, these activities will be referred to in the thesis as SSS.

<sup>23</sup> RRR was named ‘He Kōrero Pānuihia, He Hokinga Mahara’, which is indicative of the emphasis placed on rich conversations, making connections, and talking about the past central to this part of the intervention. Like SSS, these activities will be referred to in the thesis as RRR.

developed by the researcher for use in the intervention, and specifies the activities whānau were asked to complete each week.

### 3.7.2 Resources and Activities

A suite of resources was created in order to support the activities whānau were invited to complete during the intervention. The researcher sourced 24 children's books – 12 in English, and 12 in te reo Māori (see Appendix 8). Six books in English, and six books in te reo Māori were designated for use in the RRR portion of the intervention, and the remaining books were chosen to support the SSS-focused activities. Following the provision of each workshop, whānau were given two story books per week for six weeks – one book was in English, and one in te reo Māori. In keeping with Te Pihinga intervention, whānau were asked to read either book, or both books, three times each over the course of the week, and during each reading, they were required to read a series of sticker prompts strategically placed throughout the book. In keeping with the central theme in this study, namely self-determination, whānau were given the choice as to which language they opted to read to their child in – English, te reo Māori, or both. This was not determined by the researcher. However, the researcher recorded which language or languages whānau read to their child in, the method of which is outlined further on in this section.

Sticker prompts were created for each book, and whānau were asked to read these aloud when they read the book with their child. These prompts had questions or statements on them, which got incrementally more difficult with each reading. The prompts in the books that align to the RRR workshops were related to understanding the story, learning new words, understanding emotions, and connecting the story to the world around them, and the prompts in the books that align to the SSS workshops attempted to foster skills in hearing the sounds in words, particularly syllables in words, sounds that rhyme, and the initial phoneme of a word. Fig. 3 shows an example of these prompts, which was used in the English SSS component of the intervention.

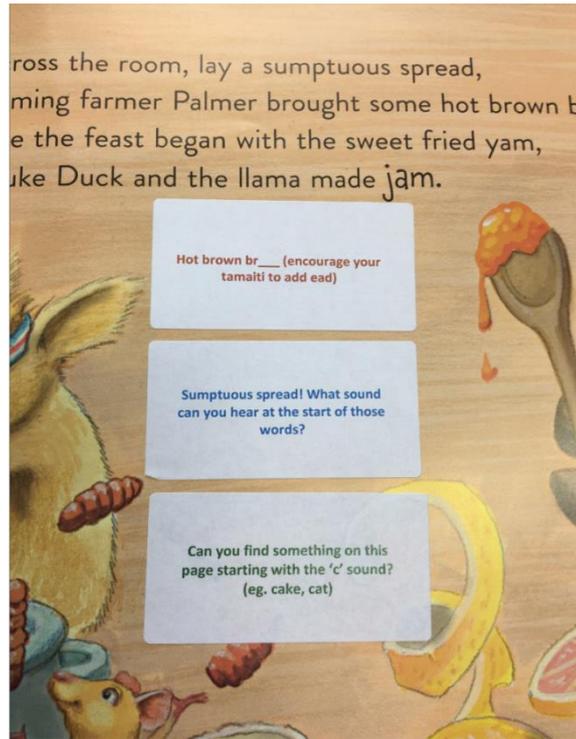


Figure 3. An example of prompts in a book used in the SSS portion of the intervention

On the first reading of each book, whānau were asked to read the orange text, on the second reading, the blue text, and on the third reading of the book, whānau read the green text. The prompts in the te reo Māori books performed the same function, but in these instances, the text on the prompts was provided in both English and te reo Māori in order to cater for the varying degrees of proficiency in te reo Māori among and between whānau. Fig. 4 provides an example of the prompts created for the books in te reo Māori. This example was taken from one of the books used in the RRR part of the intervention.

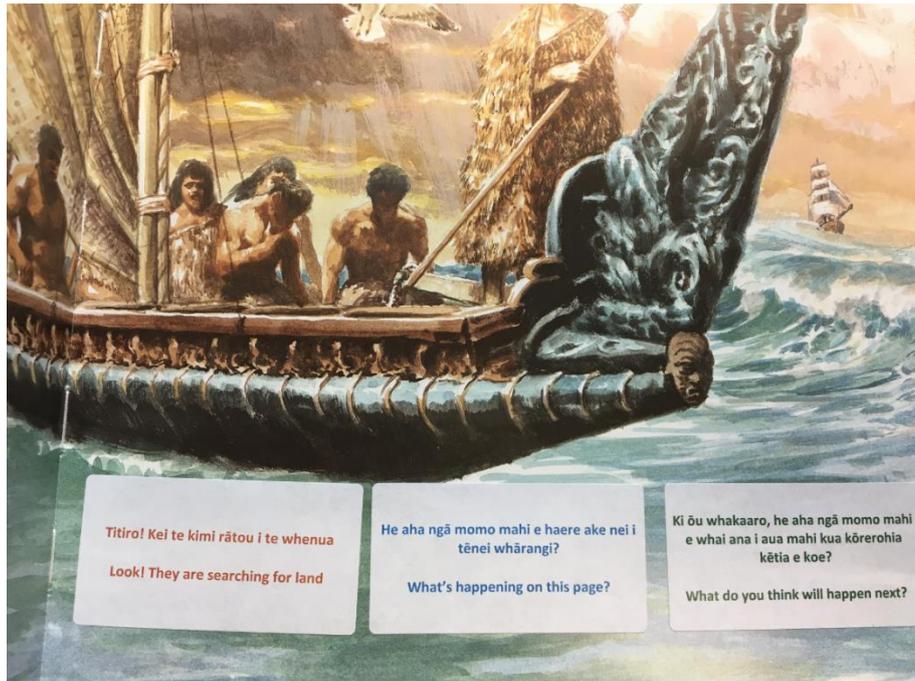


Figure 4. An example of prompts in a book used in the RRR portion of the intervention

Each week, there was also a series of activities that whānau were encouraged to engage with in their daily lives, which supported the skills promoted in the RRR and SSS portions of the intervention. Drawing from traditional Māori pedagogical practices and epistemological views, which were discussed in Chapter Two of this thesis, these activities included singing songs, reciting rhymes, having conversations with their child about past events and experiences, and playing games. The activities were constructed in such a manner that they could be integrated easily into the day-to-day routine of whānau. For example, whānau were able to complete these activities in the car, during mealtimes, or while children were bathing. Details of the activities were included with prompts at the back of each book, and whānau were asked to complete the same tasks each week for both parts of the intervention. Fig. 5 shows the activities included in an English SSS book, and a te reo Māori RRR book, respectively.

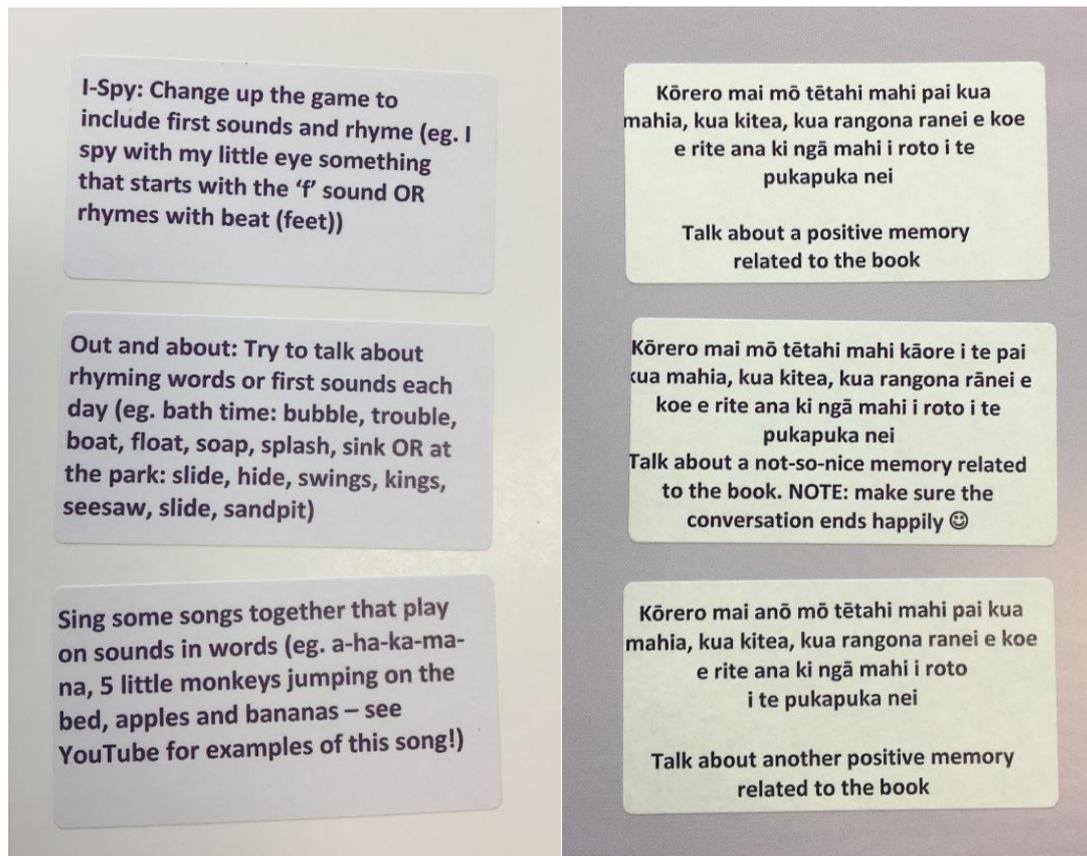


Figure 5. Weekly activities for the SSS and RRR portions of the intervention

Each time whānau read a book or completed an activity, children were asked to stamp their weekly reading chart (see Appendix 9 for an example of a reading chart). This allowed the children to gain a sense of achievement from completing tasks, and also enabled the researcher to determine the frequency of engagement with the intervention, and which language each whānau used most often. Whānau were given the opportunity each week to provide feedback on the books and activities, and to offer comment on how enjoyable and effective they perceived each activity and book to be. It is intended that this feedback will help guide and refine the intervention for possible further trials in the future.

Whānau were also given an evaluation sheet (see Appendix 10) with which to rank each book on a scale from one to five (where '1' was 'did not enjoy it', and '5' was 'enjoyed it immensely'). This permitted the researcher to ascertain which books children and whānau enjoyed, and which ones were less suitable, and would therefore need to be replaced in any further trials of the intervention. Each child was also provided with a named kete in which to keep their books and reading charts for the week, along with their evaluation sheets. A revolving library was

established in order to deliver the books to the children. Each whānau started with a different set of books, and moved through the suite of books over a six week period until each whānau had received every book. The next section of this chapter describes the timeline for gathering data from the pre-intervention phase through to the conclusion of data collection.

### **3.8 Data Collection**

#### *Phase One*

This phase occurred in May, 2017, and involved semi-structured interviews with whānau about their experiences at school, particularly with regard to learning te reo Māori, their aspirations for their children, the literacy and language activities they practise in the home, and any challenges they may face in supporting their children's emerging literacy and wider learning. At this point, a sample of a whānau member reading to their child was also collected, and again, in every instance, it was the mother who completed this task. Whānau were provided with the same story – one version written in te reo Māori, and one version written in English<sup>24</sup>. Whānau chose which version they would like to read to their child. This activity was recorded on an audio device, and the transcripts were used to compare pre-intervention reading samples with those collected during and after the intervention to determine if any shifts occurred in the way in which each mother read with their child.

#### *Phase Two*

In June, 2017, pre-intervention data sets were collected with the children in order to establish a baseline against which future sets of data would be compared. These data provided insight into each child's phonological awareness and oral language skills, in particular, their vocabulary knowledge, and story comprehension and retell competency. More specifically, children's ability to identify the initial phoneme in words as well as their ability to segment words by 'clapping' the syllables was assessed<sup>25</sup>. Assessments conducted in this phase consisted of two

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<sup>24</sup> Pre-intervention reading sample books: *Kuwi's First Egg/Te Hua Tuatahi a Kuwi* by Kat Merewether

<sup>25</sup> This task was developed based on personal guidance from Dr Lucy Hart Paulson, a scholar in the Department of Communicative Sciences and Disorders, at the University of Montana, USA.

parts – one part that assessed children’s ability to complete the tasks using words in English, and one part that used words in te reo Māori. In these tasks, the languages were kept separate. The format for these assessments was the same in English as it was for te reo Māori, with the only change being the language used. For the complete assessments of Initial Phoneme Identification (IPI) in both English and te reo Māori, see Appendices 11 and 12. Fig. 6 shows an example of a task children completed in the IPI assessments for te reo Māori.

Here is a kete, a whetū and a pēpi. Which one starts like this? (/p/)



Figure 6. An example of an IPI task using words in te reo Māori

The researcher read the text in blue font, and pointed at each item as she uttered it. In this example, the correct answer is ‘pēpi’. This task was adapted from an intervention trialled in both online and paper-based formats (see Carson, 2012). In order to ascertain an accurate understanding of children’s skills, and to determine an average score at baseline, children completed this assessment three times each.

Children were also required to complete a segmentation task using words in both English and te reo Māori. Like the IPI assessments, the languages were kept separate, and the format for the English and te reo Māori tasks remained the same, with the only change being the language used. Children also completed the segmentation task three times each. For the complete Syllable Assessment (SA) activities, see Appendices 13 and 14. Fig. 7 provides an example of a test item children completed in the SA task for te reo Māori.



Here is some pounamu. Can you say pounamu?  
Now can you say it with your hands?

Figure 7. An example of an SA task using words in te reo Māori

Again, the researcher read the text in blue font, pausing after asking the children if they could say 'pounamu' to ensure they were able to utter the word. The children were then asked to segment the word by clapping out each syllable. In this case, the correct answer is 'pou-na-mu', or three claps. For both the IPI and SA tasks, the researcher modelled an item to ensure the children understood what was being asked of them, and they completed two practice items before the official assessment began.

The children also completed two story retells – one in English (*Peter's Chair*) and one in te reo Māori (*Kei Hea Taku Pōtae*). These books were chosen because they are both out of print, and therefore it was less likely the children would be familiar with the story. This was important as it ensured none of the children had an advantage due to prior knowledge of the stories. The researcher confirmed the children had not heard the story prior to commencing the first reading of each book.

In this section of the assessments, the children heard *Peter's Chair* or *Kei Hea Taku Pōtae* in English or te reo Māori, respectively, the telling of which had been pre-recorded on a dictaphone. This was to ensure each child heard the story in the same manner. While the children listened to the story, the researcher turned the pages of the book in sync with the audio recording. After they heard the story, the children were asked key comprehension questions about what occurred in the book. If they were unsure of the answers, the researcher provided them with these details. For a list of the comprehension questions, see Appendices 15 and 16.

After answering the series of questions, children were asked to retell the story in their own words to a kiwi puppet. In order to give this task a sense of logic and

authenticity, the researcher told the children the kiwi puppet had been sleeping in a bag, and therefore missed the story on its first telling. While children were relaying the kiwi puppet the story, the researcher used open statements to encourage them in their dialogue, such as ‘What happened in the beginning?’, ‘What happened next?’, and ‘What else can you remember?’ Children completed each story retell once.

The final activity in this round of assessment involved a Picture Naming Task (PNT), where children were shown eight images of nouns from the books used in the intervention, before they were asked if they could name each image. In this instance, English and te reo Māori words were both used together. Like the story retell activity, children completed the PNT once. The details of this assessment are provided in Appendix 17.

Following the completion of Phase Two of data collection, the first part of the intervention commenced, with whānau undertaking either the RRR or SSS portion of the intervention. These activities took place over a six week period.

### Phase Three

After whānau completed the first part of the intervention, in July, 2017, at the mid-intervention data collection point, the same battery of assessments was run again with the children in order to identify if any shifts had occurred as a result of the first part of the intervention. Children completed one story retell in both English and te reo Māori, one PNT, and two SA and IPI assessments in both English and te reo Māori.

Another sample of each mother reading to their child was also collected at this point. Again, the mothers were provided with the same story – one version written in English and one version written in te reo Māori<sup>26</sup>. This story differed from the story used in Phase One. Each mother chose which version they would like to read to their child, and this activity was recorded on a Dictaphone. This allowed for the revelation of any shifts in reading style from baseline that may have occurred, and also allowed for a comparison between the reading styles of the two groups that completed different parts of the intervention during Phase Two.

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<sup>26</sup> Mid-intervention reading sample books: *Monkey Puzzle/Kei Hea Taku Mama* by Julia Donaldson

#### Phase Four

This phase occurred in August, 2017, and involved the provision of the second whānau workshop. The group that completed the RRR workshop in Phase Two completed the SSS workshop, and the group that completed the SSS workshop in Phase Two attended the RRR workshop. Following the workshops, the second part of the intervention commenced, in which whānau utilised the tools they were provided with at the workshops over a six week period. Again, one English book and one te reo Māori book were provided each week to whānau to support these activities, and a revolving library was established to circulate the books.

#### Phase Five

Following the completion of the second part of the intervention, in October, 2017, a third round of assessment using the same measures employed in Phases Two and Three of the study was undertaken with the children. One story retell in both English and te reo Māori, one PNT, and three SA and IPI assessments in both English and te reo Māori were completed by the children. When compared with data sets collected at baseline and at the mid-intervention point of the study, the data collected at this stage allowed for any shifts that may have occurred to be revealed.

During this phase, another sample of each mother reading to their child was collected. Again, the mothers received the same story – one version written in te reo Māori and one version written in English<sup>27</sup>. This story differed from the story used in Phases One and Three. When comparing this sample with the samples collected in Phases One and Three of the study, any changes to reading style, and child and whānau engagement were able to be determined. This activity essentially allowed the researcher to see if the intervention influenced whānau reading practices. In addition to the reading sample, whānau also completed a post-intervention questionnaire, which contained the same questions as the questionnaire completed pre-intervention. However, the second iteration of the questionnaire also contained a section in which whānau could provide feedback on the intervention (see Appendix 18). These aspects of the data will inform decisions made by the researcher concerning any future trials of the intervention.

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<sup>27</sup> Post-intervention reading sample books: *When The Bell Rings/Tangi Ana Te Pere* by Maxine Hemi

At this point, the researcher made observations in Nōku Te Ao with regard to their language and literacy practices, and the data sets acquired during these visits were presented in Section 3.6 of this chapter.

### *Phase Six*

In April and May, 2018, the researcher completed a six-month follow up round of assessments with the children, in order to determine if the children had maintained or further developed the skills they acquired during the intervention. At this point, the children completed one story retell in both English and te reo Māori, one PNT, and one SA and IPI assessment in English and te reo Māori.

The following section of this chapter provides details on the analysis of the numerous data sets gathered during the various data collection phases explained above.

### **3.9 Analysis**

The model of analysis used in this work is highly innovative. In order to align with the holistic tendencies of a general Māori worldview, and the contentions put forward by sociocultural theory and ecological systems theory, the model seeks to generate comprehensive and universal insights into the early literacy development of each child participating in this research, and the environment in which their literacy skills are emerging. The model consists of three main parts. Firstly, the theoretical framework established in Section 3.2 offers a lens to interpret the findings generated in this study. Secondly, the crossover design of the intervention allows for more rigorous conclusions to be drawn about the efficacy of the intervention in creating positive shifts in children's foundational literacy skills, and finally the contextual nature of the data sets relating to the home literacy environment of each whānau, discussed in Chapter Four of this work, provides further insight into the various series of data presented in this thesis.

It was stated in the opening paragraph of this work that the data sets generated in this research are not solely interpreted using descriptive statistical analysis, although this thesis includes that. Rather, a qualitative approach is employed, which is inspired by both Western and Indigenous methods of understanding data. In reference to the latter, in traditional times, the development of science was

informed by observing trends and patterns that repeat over time and in various contexts (Macfarlane & Macfarlane, 2018). These factors served to create rigorous epistemological understanding about phenomena, and this approach is replicated in this work, where patterns in the data sets offer insight and understanding regarding the effects of the intervention. Furthermore, this study draws from contentions that emerged from Western understanding of data analysis, specifically the methods used in replication design (Szanton, 1981). Yin (2009) argues that replication of a study across single cases (in this instance, eight) produces patterns which are evidence of a general phenomenon, and from which solid conclusions can be drawn. For case study analysis, including single case design, Trochim (1989) states that what he refers to as ‘pattern-matching logic’ is one of the most rigorous techniques to employ in order to analyse and interpret data sets such as those generated in this work.

The findings from the numerous phases and aspects of data collection are presented in Chapters Four, Five, and Six of this thesis. In order to ensure the reliability of the results, every set of data was analysed by an independent researcher, who acted as a reliability coder, and were found to be 100 per cent identical to the initial sets. Unlike the primary researcher, who was aware of the condition assignment of the participants, and who knew the whānau well, the reliability coder was not privy to the children’s condition order, nor did they know the participants and their whānau.

Data analysed in Chapter Four are those sets that provide insight into literacy practices in the home of each whānau participating in the study. The sets include pre- and post-questionnaire data, the questions of which were grouped according to the following themes:

- Types of books read in the home
- Frequency that reading occurs
- The child’s level of interest in reading
- Style of reading that whānau use
- Range of other literacy activities that occur in the home

The data sets produced by the pre- and post-intervention questionnaire are presented in bar graphs. While some may contend bar graphs typically represent cumulative data, it is argued that this form of reporting on the pre- and post-

intervention questionnaire data is culturally relevant. The bar graphs in Chapter Four clearly indicate the pre- and post-intervention responses to each question, and therefore they align with the Māori practice of using visual aids to store, convey, and transmit information about a particular topic. In addition to this, it was mentioned in Section 3.1 of this chapter that one of the overarching intentions of this work is that the data and findings remain accessible to whānau, and the presentation of the aforementioned data sets in bar graphs fosters this accessibility.

Using SALT Version 18.3.2, Chapter Four also analyses the reading samples recorded with each whānau at the various stages of data collection. Prior to analysing these samples, the researcher eliminated the text of the stories from the transcribed material, and focused on extra-textual utterances. This decision ensured differences in the texts of the stories would not distort the findings of these samples. The key question asked in this instance is: 'How has the intervention impacted on the style of reading each whānau employs with their child?' More specifically, in order to align with the 'Style of Reading' questions whānau were asked in the pre- and post-intervention questionnaire, changes between each reading sample to the following key points are considered. The researcher examined if whānau:

- Read the book as it is written
- Talked about the pictures in the book
- Talked about sounds in words
- Talked about letters

One element of focus in the intervention was on encouraging a more interactive reading style, so the researcher also examined total extra-textual utterances of both the mother and the child, the number of questions the mother and child asked, and the number of responses offered to questions asked. These data sets, together with the information generated by the pre- and post-interventions questionnaires, offer insight into whānau reading practices in the home, and reveal any shifts in these practices as a result of the intervention.

The findings of the SA and IPI assessments of each child are presented in Chapter Five in the form of line graphs. As it was previously mentioned, a two standard deviation band method was used in order to statistically validate the data, and the effects of the intervention. It must be noted that the points plotted on each graph

are averages of repeated assessment measures, where three test occurrences were conducted pre- and post-intervention, and two were carried out mid-intervention.

Finally, Chapter Six depicts the results from those activities that generated data on aspects of the oral language skills of each child, namely story comprehension assessments, story retell tasks, and PNT. The data sets generated by the story retell assessments were analysed using SALT, and the following aspects of each English language sample were considered:

- Total utterances
- Complete and intelligible (C&I) utterances
- Mean length of utterances in words (MLUw)
- Total words
- Different words

It is important to note that shifts that may occur in children's phonological awareness skills as a result of an intervention can be revealed over a comparatively short space of time, whereas changes that may occur in children's oral language proficiency generally take longer to develop, and thus be detected (Chard & Dickson, 1999). Paris (2005) explains that literacy development involves the emergence of two types of skills: constrained skills and unconstrained skills, with phonological awareness falling under the former category. He contends that constrained skills are critical to, though not solely sufficient for, literacy development, and they are skills that can and should be acquired in a relatively short space of time, and at an early age. Unconstrained skills, on the other hand, which are inclusive of vocabulary knowledge, and story comprehension and retell skills, take much longer to emerge than constrained skills. Paris argues such skills continue to develop across one's lifetime, becoming significantly more complex in adolescence and adulthood. Therefore, the analysis of the children's oral language samples generated by the story retell task, and presented in Chapter Six of this work, may not be indicative of the efficacy of the activities associated with the intervention in strengthening aspects of the children's oral language skills. This is because the intervention ran for a total of 12 weeks, with the part of the intervention that focused more specifically on oral language running for six weeks, which may not have been long enough to generate and reveal shifts, and, in turn, to draw solid conclusions about the effectiveness of this aspect of the intervention.

A thematic analysis of the combined findings presented in Chapters Four, Five, and Six is provided in Chapter Seven of this work, and is conducted based on the theoretical perspectives mentioned earlier on in this chapter, together with the insights generated by the literature review presented in Chapter Two. In keeping with a single case design, and to ensure the progress made by the children is viewed in relation to the unique context of each child, comparative analysis between children is not conducted, although some contentions are put forward in relation to each cohort, that is, in light of the order in which each child completed the intervention. In closing, this work was a small case study that produced some understanding of the emerging literacy of the children involved in the research. It is not assumed that these findings are indicative of all four-year-old, bilingual children. Consideration must be given to the fact the researcher is known to the participants, and that, ultimately, the researcher decided on the methods by which the various elements of the numerous data sets would be viewed and analysed. The researcher was also known to the children, and this was a critical factor in developing a comfortable and trusting relationship with each of the children.

### **3.10 Summary**

This chapter outlined the ideological orientations and methodological approaches employed in the research. Two theoretical constructs were described, analysed, and applied to the case study – those being sociocultural theory, and ecological systems theory. Using data collected during the interviews with whānau, the four-year-old participants of the study were introduced, and data sets generated during the observations made at Nōku Te Ao were presented in order to provide understanding of the activities at the early childhood centre attended by the children. Following this, details were offered concerning the design of the study, as well as the development and implementation of the intervention trialled in this work. This chapter concluded by offering details of the methods used to examine and interpret the numerous series of data collected in this research. Ultimately, this chapter provided understanding as to how the study was conducted, and contributes to the thesis by offering insight into numerous aspects associated with the intervention trialled in this work. In this regard, this chapter plays an important role in shedding light on key aspects relating to the central research question, that is: ‘What effect does a home-based literacy intervention have on the cognitive skills (phonological awareness and oral language) associated with children’s emerging literacy?’ by establishing the methodological

approaches and methods used to generate numerous series of data, which provide some answers to the overarching research question. The following chapter presents the findings of the pre- and post-intervention questionnaires, data sets related to whānau engagement in the intervention, and the reading samples collected with whānau at Phases One, Three, and Five of the data collection process.

## **CHAPTER FOUR: WHĀNAU LITERACY PRACTICES IN THE HOME**

The purpose of this chapter is to present data sets that aim to provide some insight into the home literacy practices of each whānau, and to offer a response to the question: 'How has the intervention impacted on the literacy practices of each whānau?' The previous chapter discussed the ideological orientation, theoretical framework, methodological approaches, and data collection methods and analysis used in this study. The participants were also introduced, and details of the research setting, resources used in the intervention, and how the intervention was operationalised, were offered. This chapter builds on the preceding one by presenting series of data related to whānau literacy practices, where the methods of collecting these data sets were discussed in Chapter Three. The intention of the following sections is to offer some contextual understanding of the home environment, and the influence whānau literacy practices may have on the foundational literacy skills of the children participating in this research.

Two contentions were put forward in Chapter Two that warrant acknowledgement at this juncture. Firstly, whānau play a central role, both in historical and contemporary times, in the educational development of children (Macfarlane et al., 2014; Metge, 1995; Orbell, 1978; Sharples, 2009), and secondly, there is compelling evidence that suggests whānau can significantly influence children's emerging literacy (Cairney, 1995; Champion, Hyter, McCabe, & Bland-Stewart, 2003; Kusleika, 2014; Purcell-Gates, 1996; Reese, 2013; Weigel, Martin & Bennett, 2005). For these reasons, an exploration of the contribution whānau make to the development of children's foundational literacy is a key consideration in this work.

In order to seek alignment with a general Māori worldview, which is generally accepted to be holistic in nature, this chapter is divided into eight sections. With the purpose of providing a well-rounded and universal view of the respective home literacy environments, and in keeping with the theoretical framework, particularly Bronfenbrenner's ecological systems theory, and the single case design, the data related to each whānau are presented in a section of their own. In addition to this, the researcher did not exclude any data from analysis. This decision was made in order to satisfy the conventions of an Indigenous approach to research, where an ultimate goal is one of respect for the experiences and gains made by each child and their whānau during the intervention. Each section is divided into three parts.

Firstly, the findings of the questionnaires (see Appendices 5 and 18) conducted with whānau pre- and post-intervention are specified. Secondly, some analysis of the whānau reading samples, which were collected pre-, mid-, and post-intervention, then examined using SALT Version 18.3.2 which revealed patterns in the data, is offered. Finally, whānau engagement with the intervention is depicted, together with their evaluation<sup>28</sup> of the intervention overall. It has been mentioned that the overarching aim of this chapter is to shed light on whānau literacy practices. However, this chapter has a secondary function, which is the provision of contextual insight into how the home literacy environment may influence the emerging literacy skills of the children participating in this study.

The following sections present the aforementioned series of data related to each whānau. It was noted in Chapters Two and Three of this thesis that the invitation to participate in this research was extended to all members of each whānau, and in every instance, it was the mother who accepted the invitation, and engaged with every aspect of the study. This includes completing the questionnaires related to their home literacy practices, providing a reading sample at the various data collection points, and evaluating the intervention. The findings presented in this chapter are analysed in depth in Chapter Seven of this thesis, using the various lenses for analysis constructed in Chapters Two and Three of this work. The first section of this chapter presents data sets concerning the whānau literacy practices of Atawhai.

## **4.1 Atawhai**

This section offers some insight into the literacy practices of the home environment of Atawhai.

### 4.1.1 Questionnaire Data

Prior to the commencement of the intervention, Atawhai's mother reported that Atawhai was 'very interested' in reading together, and this remained the case post-intervention. However, her interest in reading alone shifted from 'not very interested' pre-intervention to 'quite interested' post-intervention. Pre-intervention, Atawhai was

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<sup>28</sup> Whānau were provided with a scale to evaluate the intervention, where '1' was 'did not enjoy it at all', and '5' was 'enjoyed it immensely'.

‘not very interested’ in what other members of her whānau were reading, and this decreased further post-intervention to ‘not at all interested’. Atawhai and her whānau read very frequently, and her mother noted that pre- and post-intervention, an adult member of her whānau reads to her ‘7 or more times per week’. Additionally, both pre- and post-intervention, Atawhai observes members of her whānau reading ‘7 or more times per week’.

Atawhai engages with a range of books during shared book reading. Pre- and post-intervention, her mother reported that Atawhai is read rhyming books ‘very often’, non-rhyming books ‘sometimes’, non-fiction picture books ‘very often’ and ‘sometimes’ respectively, and alphabet books ‘sometimes’ and ‘never’ respectively. The decline in the frequency with which Atawhai is read non-fiction picture books, and in particular, alphabet books, may be related to her age, and the influence this has on the types of books she is interested in. The following graph (Fig. 8) depicts the pre- and post-intervention results of the various styles of reading Atawhai’s whānau uses during shared book reading.

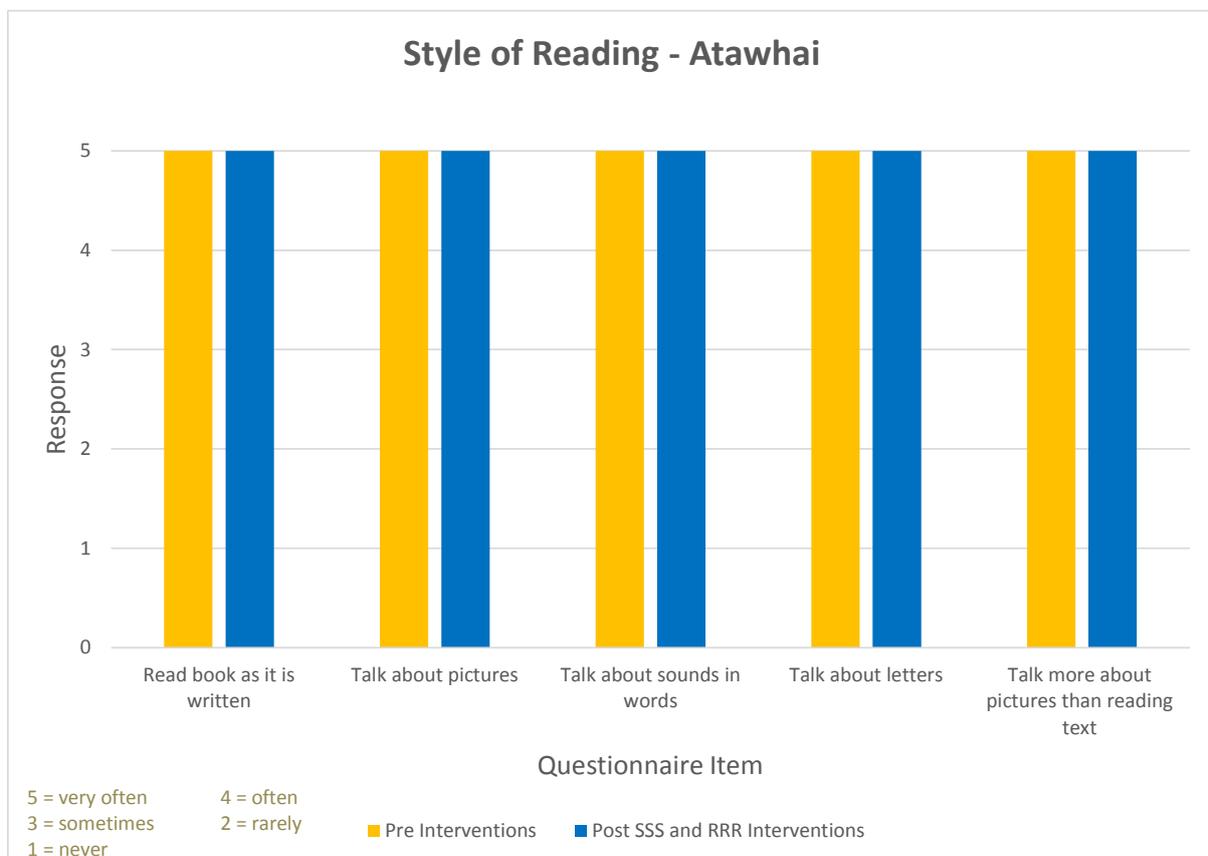


Figure 8. Style of Reading – Atawhai

Fig. 8 shows Atawhai was exposed to a variety of reading styles pre- and post-intervention, with her mother reporting that Atawhai’s whānau reads books as they are written, talks about the pictures, talks about the sounds in words, talks about letters, and talks more about the illustrations in a book than reading the text ‘very often’. There was no shift in behaviour from pre- to post-intervention.

Snow et al. (1998) argue certain kinds of literacy activities assist with the development of oral language, and stimulating cognitive skills necessary for literacy acquisition, such as phonological awareness. Therefore, in addition to questions related to reading books, whānau were asked about literacy activities beyond that of shared book reading. Fig. 9 shows the range of literacy activities Atawhai’s whānau engages in.

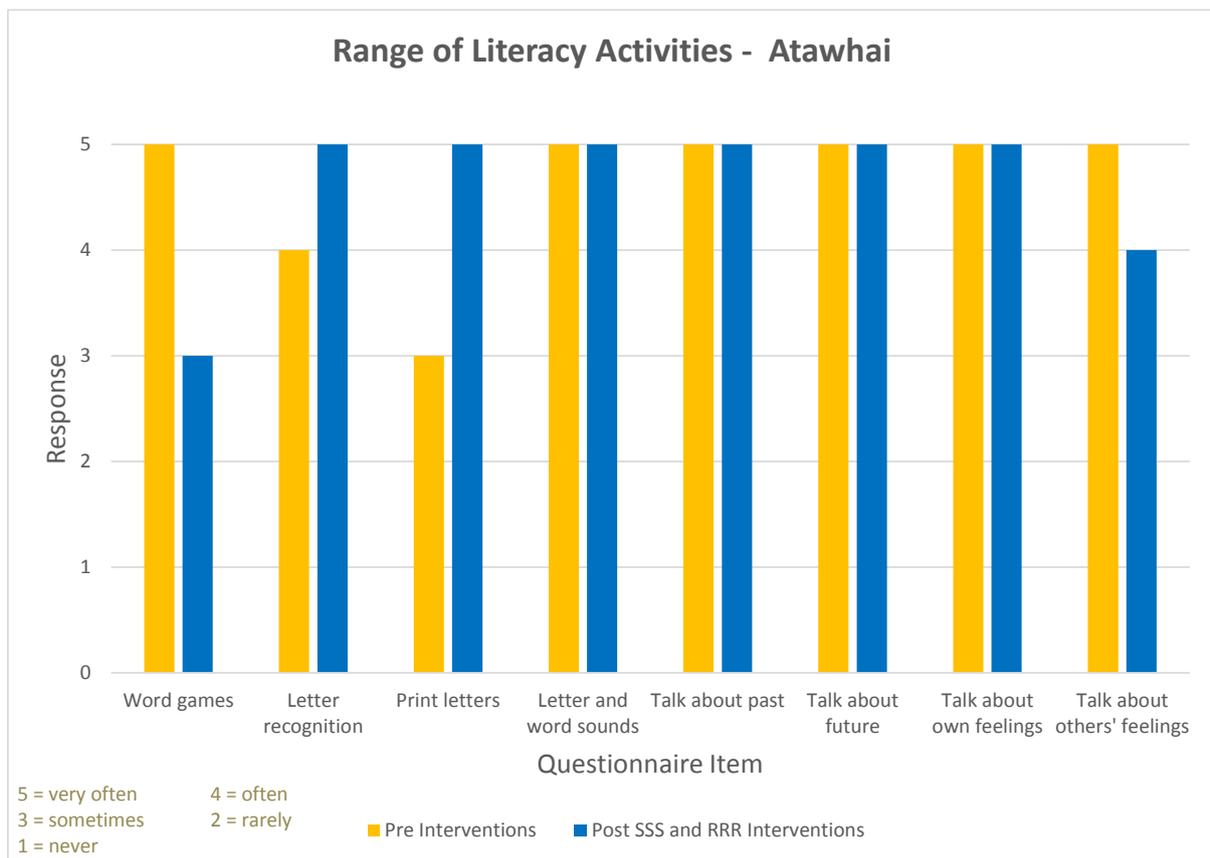


Figure 9. Range of Literacy Activities – Atawhai

Atawhai participates in a range of literacy activities, including playing word games, recognising letters and their sounds, printing letters, talking about the sounds in words, and having conversations about the past, the future, and her own, and

others' feelings. Atawhai participates in such activities 'very often', and in most cases, this was the response to each question pre- and post-intervention. However, some positive shifts occurred in the frequency of engagement in certain activities pre- and post-intervention, specifically playing word games, recognising and printing letters, and talking about others' feelings. The next section presents data sets generated by the Atawhai's whānau reading samples.

#### 4.1.2 Whānau Reading Samples Data

Table 2 depicts the analysis of extra-textual utterances across the three reading samples collected pre-, mid-, and post-intervention with Atawhai and her mother. Atawhai's whānau completed the SSS portion of the intervention first, and following that, the RRR activities. At each data collection point, Atawhai's mother read her the English version of the story.

<b>ACTIVITY</b>	<b>T1</b>	<b>T2</b>	<b>T3</b>
<b>Total utterances (mother)</b>	26	29	58
<b>Total utterances (child)</b>	18	19	29
<b>Read text of book only</b>	No	No	No
<b>Refers to pictures</b>	1	5	15
<b>Refers to sounds</b>	0	13	4
<b>Refers to letters</b>	0	0	0
<b>Asks question (mother)</b>	5	5	19
<b>Asks question (child)</b>	0	0	1
<b>Answers question (mother)</b>	0	0	1
<b>Answers question (child)</b>	4	2	12

*Table 2. Whānau Reading Samples Analysis – Atawhai*

Atawhai's mother had a reasonably interactive reading style pre-intervention, although the points her mother commented on changed mid-intervention, where there was a heavier focus on pointing out the sounds in words, and post-intervention, where her mother made a greater number of references to the illustrations in the book. The pattern revealing the significant increase in commenting on sounds in words is due to the activities and reading style Atawhai and her mother engaged in during the SSS portion of the intervention. Similarly, a higher focus on the pictures, and asking Atawhai questions post-intervention is a result of the skills acquired during the RRR part of the intervention. Atawhai also engaged in an interactive manner during shared book reading, responding to her mother's questions, and asking one question herself. The final part of this section presents data related to the engagement in the intervention of Atawhai's whānau, and their evaluation of the intervention itself.

#### 4.1.3 Intervention Engagement and Evaluation Data

Atawhai's whānau engaged in the intervention using both English and te reo Māori, reading the English books 78.9 per cent of the time, and the te reo Māori books the remaining 21.1 per cent of the time. Overall, her whānau had a participation rate of 83 per cent, which was calculated based on the number of weeks her whānau read the prescribed books, and completed the activities. Sickness and a whānau vacation prevented the whānau from completing two weeks of the intervention.

In the section of the post-intervention questionnaire where whānau could evaluate the intervention, Atawhai's mother reported that both Atawhai and her whānau 'enjoyed it immensely', circling a '5' for both of these questions. In particular, they enjoyed "getting the latest books to read". Atawhai's mother indicated she struggled to read some of the more difficult books in te reo Māori, but would talk about these stories by looking at the illustrations in the book. As a result of the intervention, Atawhai's mother noticed Atawhai has greater awareness of rhyming words, and the sounds in words. She also believes the intervention supported them as a whānau with regard to their enjoyment of reading, and their desire to ensure reading has a salient place in their home.

## **4.2 Tia**

This section provides some understanding of the home literacy practices of Tia and her whānau.

### 4.2.1 Questionnaire Data

Tia's mother reported that, pre-intervention, Tia was 'quite interested' in reading together but that post-intervention, she was 'not very interested' in reading together. She was also 'not very interested' in reading alone pre- and post-intervention, respectively. Again, there was no change pre- and post-intervention with Tia's interest in what other members of her whānau may be reading, with her mother reporting she was 'quite interested'. Tia and her whānau engaged in shared book reading '3-4 times per week', pre- and post-intervention, and Tia observed other members of her whānau reading '7 or more times per week' pre-intervention, and '5-6 times per week' post-intervention.

Tia is exposed to a range of books to varying degrees during shared book reading. Her mother indicated that pre- and post-intervention, they read rhyming books 'very often', non-fiction picture books 'sometimes', non-rhyming books 'often' and 'sometimes', respectively, and alphabet books 'rarely' and 'sometimes' respectively. The following graph (Fig. 10) depicts the pre- and post-intervention results of the various styles of reading Tia's whānau uses during shared book reading.

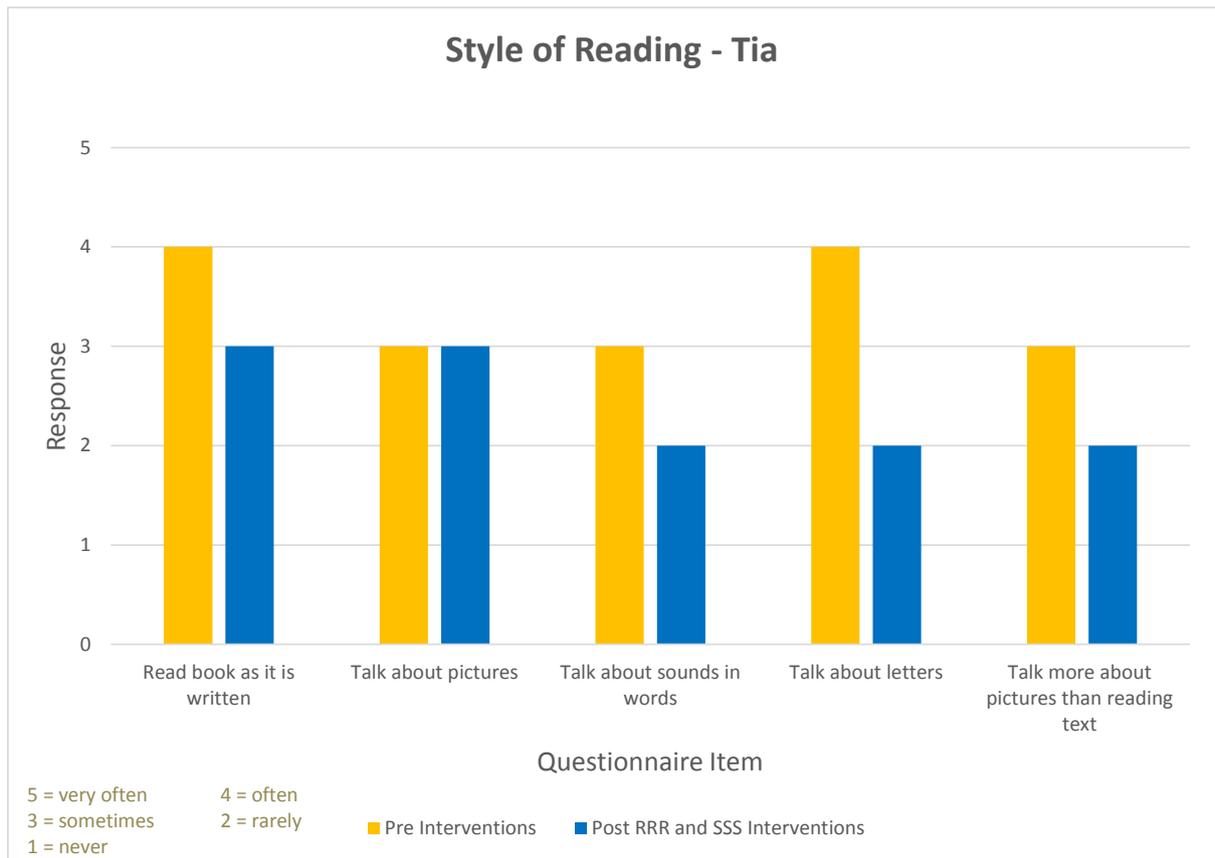


Figure 10. Style of Reading – Tia

Fig. 10 shows that there were numerous shifts in the way members of Tia’s whānau read to her pre- and post-intervention, with her mother reporting a decline in frequency across most styles of reading. The only consistency pre- and post-intervention was the rate at which Tia’s whānau talk about the illustrations in books, which is ‘sometimes’. Similarly, Fig. 11, included below, depicts numerous declines in the frequency with which Tia’s whānau engages in various literacy activities beyond that of shared book reading.

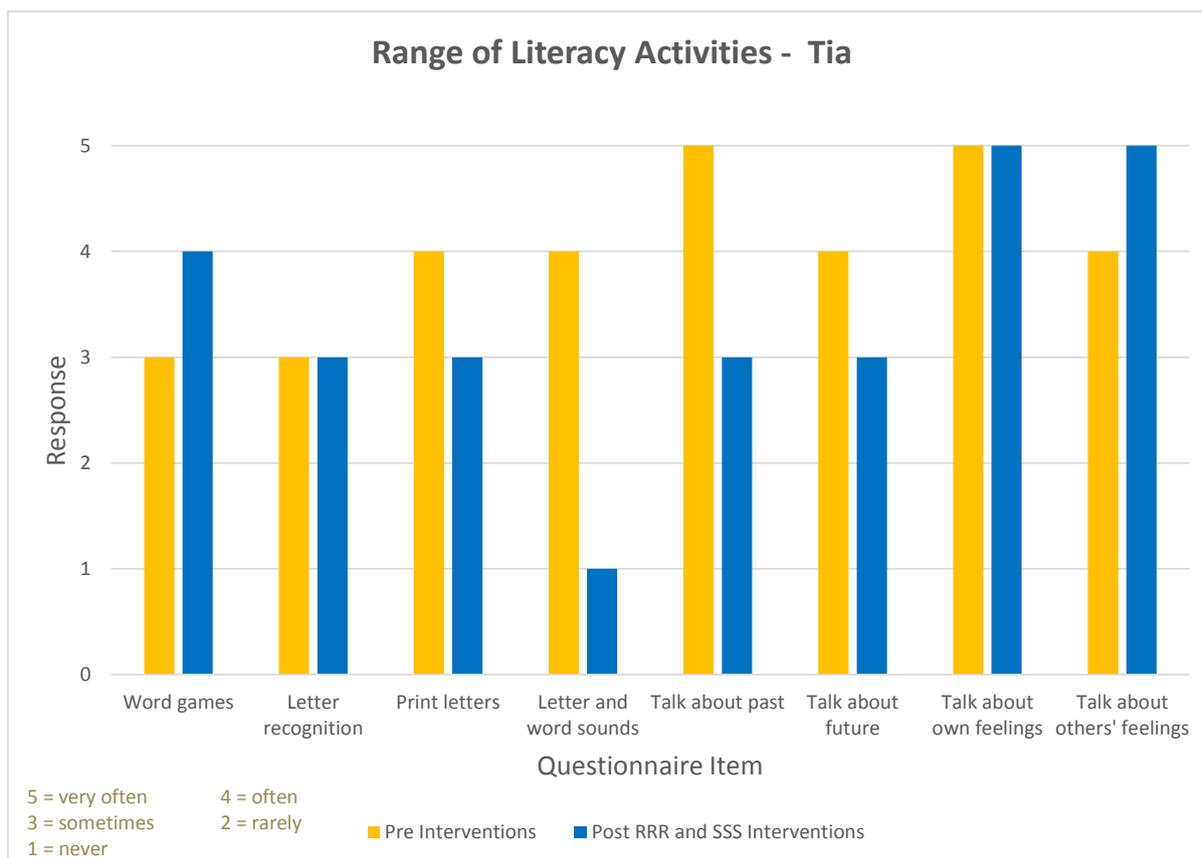


Figure 11. Range of Literacy Activities – Tia

Fig. 11 shows an increase in the frequency that Tia’s whānau engage in word games, and conversations about others’ feelings. The rate at which Tia is encouraged to recognise letters, and have conversations about her own feelings, remained the same pre- and post-intervention. The following section presents data sets generated by the whānau reading samples provided by Tia and her mother at the various stages of data collection.

#### 4.2.2 Whānau Reading Samples Data

Table 3 shows the analysis of extra-textual utterances across the three reading samples collected pre-, mid-, and post-intervention with Tia and her mother. Tia’s whānau completed the RRR portion of the intervention first, and following that, the SSS activities. At each data collection point, Tia’s mother read her the English version of the story.

<b>ACTIVITY</b>	<b>T1</b>	<b>T2</b>	<b>T3</b>
<b>Total utterances (mother)</b>	46	22	44
<b>Total utterances (child)</b>	17	11	15
<b>Read text of book only</b>	No	No	No
<b>Refers to pictures</b>	3	6	7
<b>Refers to sounds</b>	0	1	2
<b>Refers to letters</b>	0	0	0
<b>Asks question (mother)</b>	10	3	10
<b>Asks question (child)</b>	1	1	4
<b>Answers question (mother)</b>	1	0	4
<b>Answers question (child)</b>	6	1	3

*Table 3. Whānau Reading Samples Analysis – Tia*

During shared book reading, the patterns indicate that Tia’s mother did not simply read the book as it was written but rather made reference to the illustrations in each book, and engaged Tia in a conversation about what was occurring in the stories. Following completion of the SSS activities, Tia’s mother made a higher number of references to the sounds in words than she did prior to having completed this portion of the intervention. As the intervention progressed, Tia’s mother also commented on the pictures in the books more. Prior to the commencement of the intervention, Tia’s mother already asked Tia a reasonably significant number of questions during shared book reading, and while this trend took a downward turn at the mid-intervention point, it rose again post-intervention. The following part of this section presents data related to the level of engagement in the intervention of Tia’s whānau, and their evaluation of the intervention itself.

### 4.2.3 Intervention Engagement and Evaluation Data

Like Atawhai's whānau, Tia's whānau participated in the intervention using both English and te reo Māori, reading the English books, and completing the activities in English 65.6 per cent of the time, and reading the te reo Māori books, and engaging with the te reo Māori activities, 34.4 per cent of the time. Tia's whānau presented with a 75 per cent engagement rate across the intervention, and were unable to complete three weeks of the intervention due to a death in the family, and other commitments. Tia's mother found some of the books in te reo Māori challenging to read, and observed this impacted on Tia's willingness to engage in the book, and to remain attentive for the duration of the story.

Tia's mother indicated Tia's level of enjoyment of the intervention as '4', and her own as '5'. Tia's mother noticed that Tia did not enjoy the books in te reo Māori, and feels this was due to her own limitations with the language. She also observed that, post-intervention, Tia loves to point out words and sounds that rhyme, and also believes that they read together more as a whānau as a result of their participation in this study.

## **4.3 Kahu**

This section reveals some of the home literacy practices of Kahu and his whānau.

### 4.3.1 Questionnaire Data

Kahu's mother indicated that, pre-intervention, Kahu was 'very interested' in shared book reading, and post-intervention, he was 'quite interested'. Similarly, he was 'quite interested' and 'not very interested' in reading alone pre- and post-intervention respectively. There was no change in his interest in members of his whānau reading pre- and post-intervention, which his mother reported as 'quite interested'. Kahu is exposed to shared book reading '3-4 times per week' and this remained the same post-intervention. There was also no change post-intervention to the number of times per week he observes his whānau reading, which his mother indicated was '5-6 times per week'.

Kahu engages with a range of books during shared book reading. His mother reported a decrease in the frequency they read non-rhyming books, and alphabet books, pre-

and post-intervention, from ‘sometimes’ to ‘rarely’, and ‘often’ to ‘rarely’, respectively. She noted an increase in the frequency they read rhyming books from ‘sometimes’ to ‘often’, and non-fiction picture books remained a type of book they read ‘often’ pre- and post-intervention. The following graph (Fig. 12) depicts the pre- and post-intervention results of the various styles of reading Kahu’s whānau uses during shared book reading.

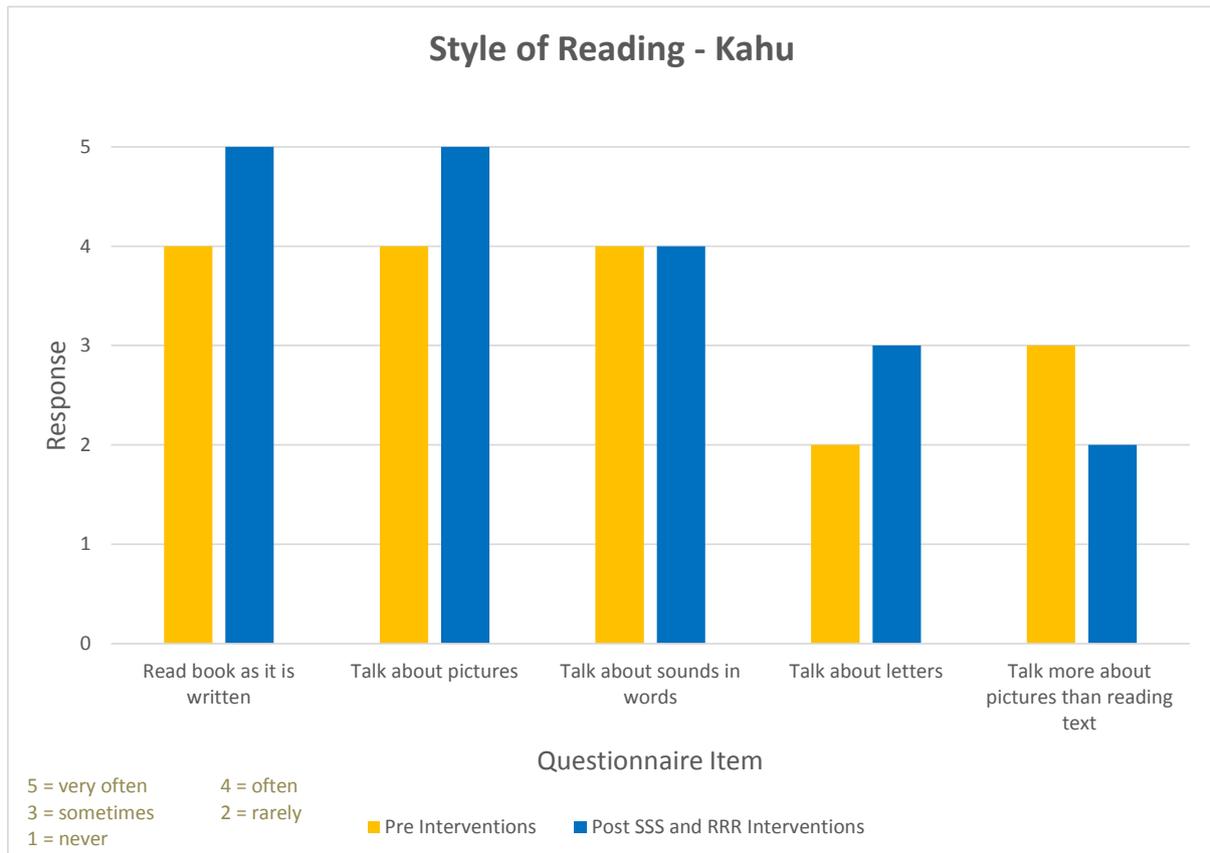


Figure 12. Style of Reading – Kahu

Kahu’s whānau uses a range of reading styles during shared book reading. Fig. 12 shows there were numerous shifts from pre- to post-intervention in the way Kahu’s whānau read to him. In most instances, his mother reported an increase in frequency in various reading styles, with the only decline in frequency occurring in talking more about the pictures in the book than reading the text. There was no change in the frequency his whānau talk about the sounds in words during shared book reading. In addition to reading with Kahu, his whānau engage in other

activities, which help to support his foundational literacy skills. Fig. 13 shows these activities, and the frequency Kahu’s whānau participate in them.

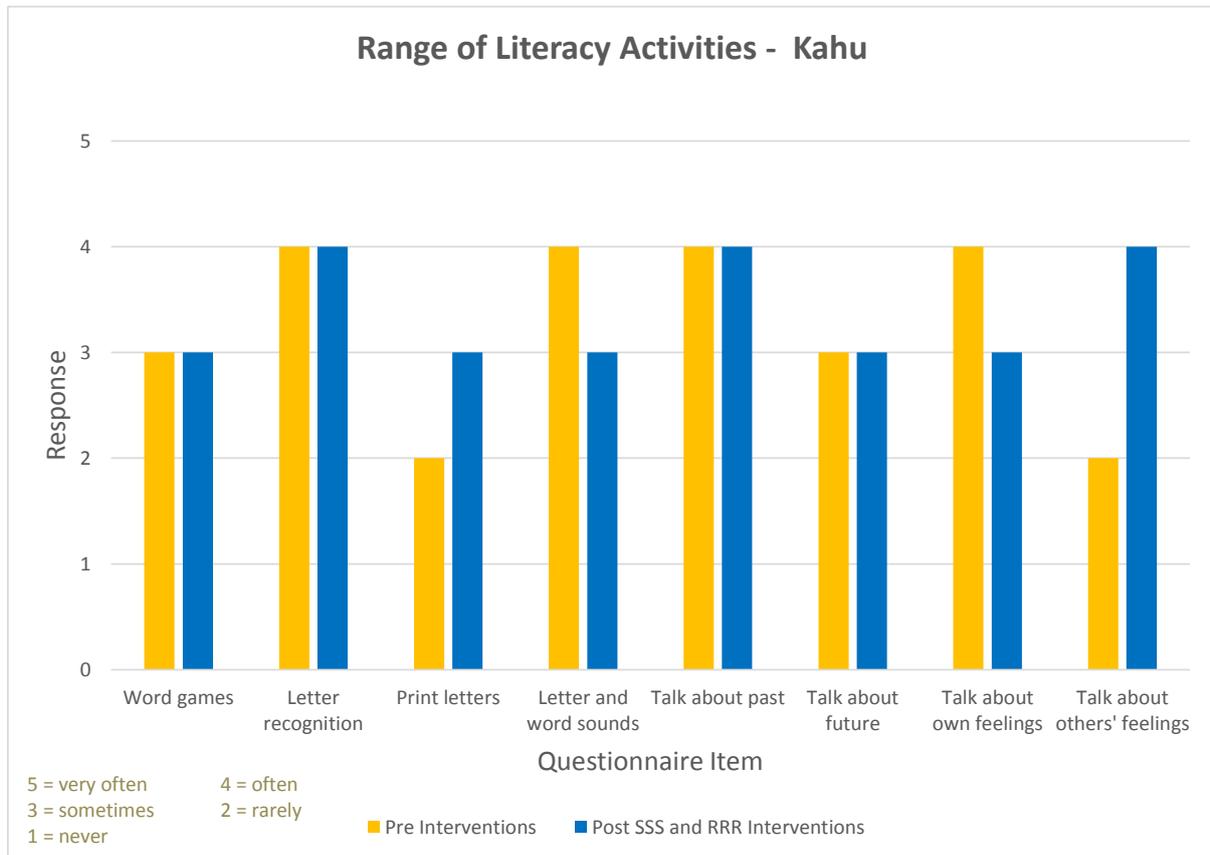


Figure 13. Range of Literacy Activities – Kahu

Some shifts occurred pre- and post-intervention concerning the range of literacy activities Kahu’s whānau participates in. Post-intervention, his whānau had a higher focus on printing letters, and talking about others’ feelings, while they talked about Kahu’s feelings, and the sounds letters and words make less frequently. Playing word games, encouraging letter recognition, and talking about the past and future remained the same pre- and post-intervention. The next section illustrates data sets generated by the whānau reading samples collected with Kahu and his mother.

### 4.3.2 Whānau Reading Samples Data

Table 4 presents the analysis of extra-textual utterances across the three reading samples collected pre-, mid-, and post-intervention with Kahu and his mother. Kahu’s whānau completed the SSS part of the intervention first, and following that, the RRR activities. At each data collection point, Kahu’s mother read him the English version of the story.

<b>ACTIVITY</b>	<b>T1</b>	<b>T2</b>	<b>T3</b>
<b>Total utterances (mother)</b>	88	79	105
<b>Total utterances (child)</b>	53	46	55
<b>Read text of book only</b>	No	No	No
<b>Refers to pictures</b>	8	4	15
<b>Refers to sounds</b>	0	11	7
<b>Refers to letters</b>	1	0	1
<b>Asks question (mother)</b>	24	26	32
<b>Asks question (child)</b>	3	1	3
<b>Answers question (mother)</b>	3	1	3
<b>Answers question (child)</b>	15	14	22

*Table 4. Whānau Reading Samples Analysis – Kahu*

Kahu’s mother had a reasonably high level of interaction with Kahu during shared book reading, pre-intervention. She often referred to the illustrations in the books, and this increased significantly after Kahu’s whānau completed the RRR portion of the intervention. A particularly noteworthy shift in the trend was that, pre-intervention, Kahu’s mother did not make any references to sounds in words, but after completing the SSS part of the intervention, she pointed out sounds in words 11 times during one book, which illustrates the effectiveness of the SSS portion of the intervention in facilitating changes to the reading style of Kahu’s mother.

Despite the fact Kahu's mother read the English version of the story to Kahu at each data collection point, she used a reasonably high number of te reo Māori words as she read, substituting numerous English words for words in te reo Māori. She also asked questions that included: "What's the Māori word for 'egg'?" Kahu was well engaged during shared book reading, answering a reasonably high number of his mother's questions, and asking questions himself. The final part of this section presents data related to the level and manner of engagement of Kahu's whānau across the intervention, and also indicates their evaluation of the intervention overall.

#### 4.3.3 Intervention Engagement and Evaluation Data

Kahu's whānau participated in the intervention using both English and te reo Māori, although English was the language of choice for a significant majority of the time. More specifically, his whānau read the English books 78 per cent of the time, and the books in te reo Māori the remaining 22 per cent. They engaged in activities using English 91.4 per cent of the time, and te reo Māori 8.6 per cent of the time. Kahu's whānau had a 92 per cent engagement rate across the intervention, missing one week due to family commitments.

Kahu's mother gave a '5' for both their whānau and Kahu's enjoyment of the intervention, and most enjoyed witnessing Kahu's "willingness to learn to read and write", and spending time together as a whānau. At times, his mother noted Kahu was tired in the evenings, and was reluctant to read the books. However, despite an occasional lack of enthusiasm, Kahu's mother believes that, as a result of the intervention, he learnt many new words, his speech is clearer, and he can recognise rhyming words, as well as letters. Post-intervention, his mother noticed he is more likely to ask the meaning of a new word, and likes to ask what will happen next in stories, and in their day-to-day activities. She also feels the intervention encouraged their whānau to read more, including their teenager. Overall, she believes Kahu is a more confident and engaged learner as a result of their participation in this research.

## **4.4 Moana**

This section offers some insight into the home literacy practices of Moana and her whānau.

### 4.4.1 Questionnaire Data

Moana has a high level of interest in reading, and her mother reported that pre- and post-intervention, Moana was ‘very interested’ in shared book reading, ‘quite interested’ in reading alone, and ‘quite interested’ in what other members of her whānau may be reading. As a whānau, they read together ‘7 or more times per week’, and Moana observes other members of her whānau reading ‘5-6 times per week’ and ‘3-4 times per week’ pre- and post-intervention, respectively.

During shared book reading, Moana’s whānau uses a variety of books, with the most popular type of book being one that rhymes. They read non-rhyming books and alphabet books ‘sometimes’, and the only positive shift that occurred from pre- to post-intervention was in the frequency they read non-fiction picture books, which moved from ‘rarely’ to ‘sometimes’. Moana’s whānau employ a range of styles during shared book reading, which is depicted in Fig. 14.

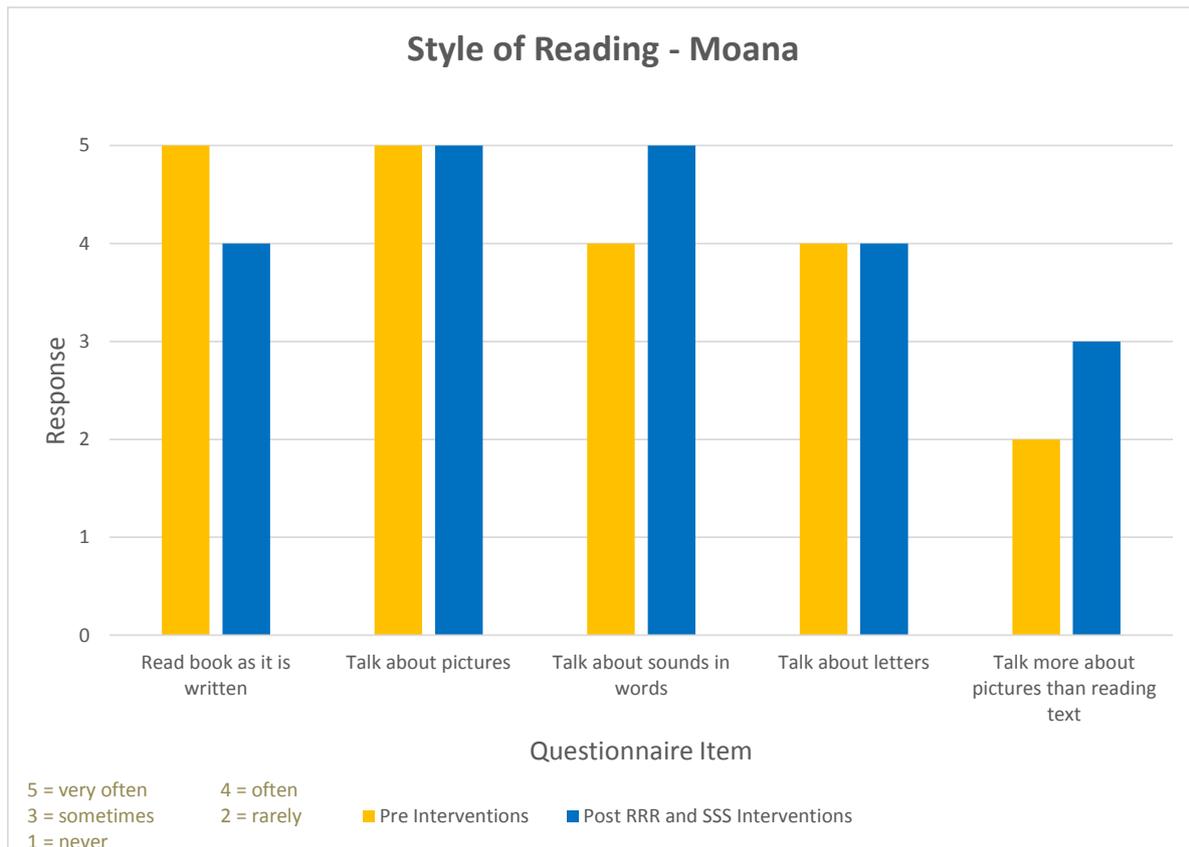


Figure 14. Style of Reading – Moana

Post-intervention, Moana’s whānau were less likely to read the book as it is written, and the shift corresponds with a change in behaviour regarding talking about sounds in words, and talking about the illustrations in a book more than reading the text, both of which her whānau were more likely to do post-intervention. Pre-intervention, her whānau talked about pictures in a book ‘very often’, and pointed out letters ‘often’; this remained the same post-intervention. In addition to shared book reading, Moana’s whānau engage in other activities that facilitate the development of her emerging literacy skills, as shown in Fig. 15.

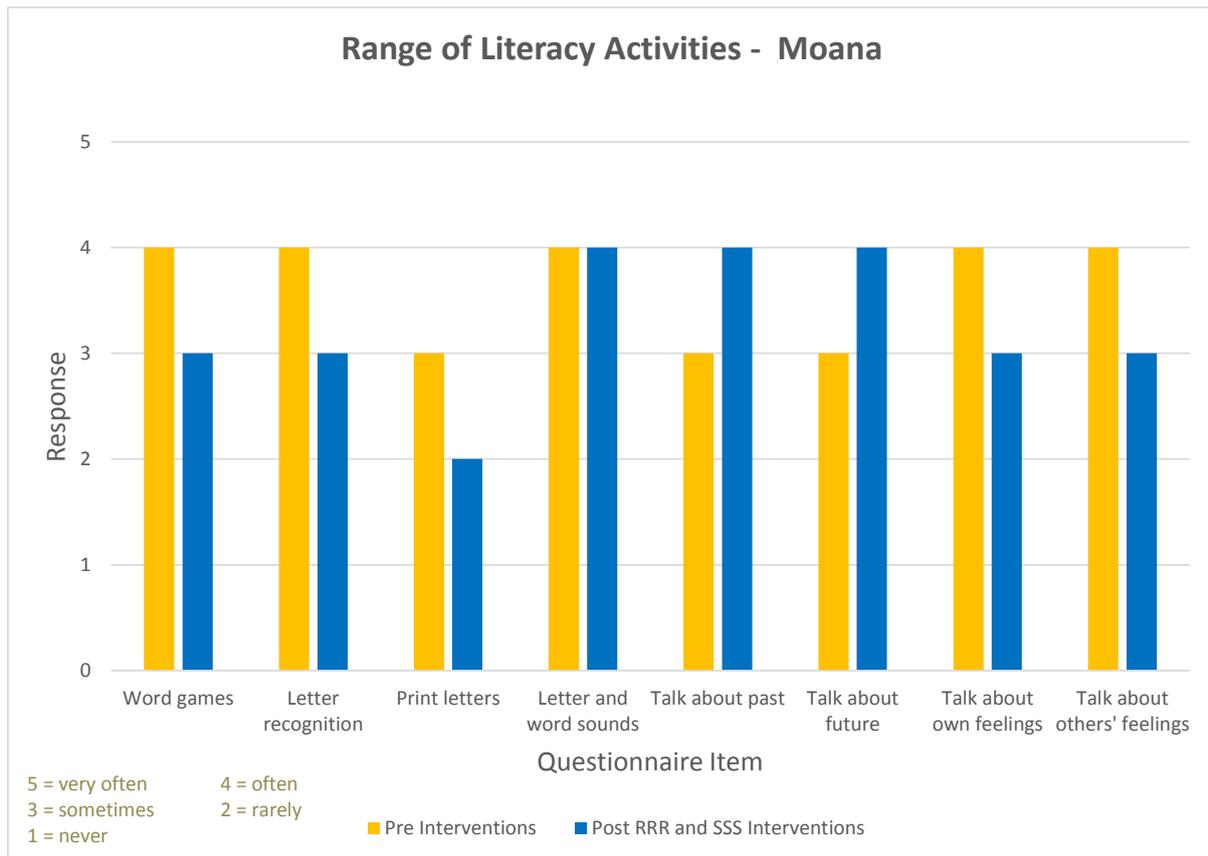


Figure 15. Range of Literacy Activities – Moana

Some shifts occurred in the range of literacy activities Moana’s whānau engage in pre- and post-intervention. Her whānau were less likely to play word games, encourage recognition of letters, practise printing letters, and talk about Moana’s and others’ feelings post-intervention, although these activities still occurred ‘often’. However, they were more likely to talk about the past and the future post-intervention, and ‘often’ talked about letter and word sounds. The following section presents data sets generated by the whānau reading samples provided by Moana and her mother at the various stages of data collection.

#### 4.4.2 Whānau Reading Samples Data

Table 5 depicts the analysis of extra-textual utterances across the three reading samples collected pre-, mid-, and post-intervention with Moana and her mother. Moana’s whānau completed the RRR portion of the intervention first, and following

that, the SSS activities. At each data collection point, Moana’s mother read her the English version of the story.

<b>ACTIVITY</b>	<b>T1</b>	<b>T2</b>	<b>T3</b>
<b>Total utterances (mother)</b>	47	43	52
<b>Total utterances (child)</b>	21	10	17
<b>Read text of book only</b>	No	No	No
<b>Refers to pictures</b>	7	8	7
<b>Refers to sounds</b>	0	0	4
<b>Refers to letters</b>	1	1	1
<b>Asks question (mother)</b>	18	22	23
<b>Asks question (child)</b>	1	2	4
<b>Answers question (mother)</b>	1	2	3
<b>Answers question (child)</b>	10	6	9

*Table 5. Whānau Reading Samples Analysis – Moana*

During shared book reading, Moana’s mother displayed an interactive reading style, pre-intervention, and this continued to be evident mid- and post-intervention. The patterns in Table 5 indicate some changes occurred as a result of the intervention; in particular, Moana’s mother did not mention sounds in words until after her whānau had completed the SSS portion of the intervention, which indicates the intervention had an impact on the way in which she read with Moana. While Moana’s mother asked a reasonably high number of questions pre-intervention, this trend rose after completing the RRR portion of the intervention. Similarly, Moana asked more questions of her mother mid- and post-intervention compared with pre-intervention. The following part of this section reveals data associated with the level and manner of engagement of Moana’s whānau in the intervention, and it concludes by presenting Moana’s mother’s evaluation of the intervention overall.

#### 4.4.3 Intervention Engagement and Evaluation Data

Like Kahu's whānau discussed in the preceding section, Moana's whānau participated in the intervention using both English and te reo Māori. They read English books 61.5 per cent of the time, and te reo Māori books for the remaining 38.5 per cent, and completed the activities in English 56.7 per cent of the time, and in te reo Māori 43.3 per cent of the time. Moana's whānau had a 100 per cent engagement rate with the intervention, and her mother rated Moana's and their whānau enjoyment of the intervention '5' and '4' respectively.

In particular, Moana's mother was pleased to see the progress Moana made during the course of the 12 weeks, and loved receiving new books to read each week. She noted it was often difficult to read some of the more challenging books in te reo Māori, so they would discuss the pictures instead. As a result of the intervention, Moana's mother believes Moana is "much better at rhyming now and recognising initial sounds. She can do it on her own, and points out 'that starts with 'F' and things that rhyme". As a whānau, they play 'I Spy' more often, and have incorporated some of the ideas included in the sticker prompts in their daily shared book reading.

### **4.5 Ana**

This section provides some understanding of the home literacy practices of Ana and her whānau.

#### 4.5.1 Questionnaire Data

Ana's mother reported that pre-intervention Ana was 'quite interested' in shared book reading, and this shifted to 'very interested' post-intervention. She is 'not very interested' in reading alone, and this was the case pre- and post-intervention. Her interest in what other members of her whānau may be reading decreased from 'quite interested' pre-intervention, to 'not very interested' post-intervention. Shared book reading occurred relatively frequently pre-intervention in Ana's whānau, with her mother reporting that they read together '3-4 times per week'. However, post-intervention, this decreased to '1-2 times per week'.

During shared book reading, Ana is 'often' read non-rhyming books, is 'never' read rhyming books or non-fiction picture books, and, pre-intervention, was 'never' read

alphabet books, although this shifted post-intervention to ‘rarely’. On the occasions Ana’s whānau engaged in shared book reading, Ana is predominantly exposed to two styles of reading, as depicted in Fig. 16 below.

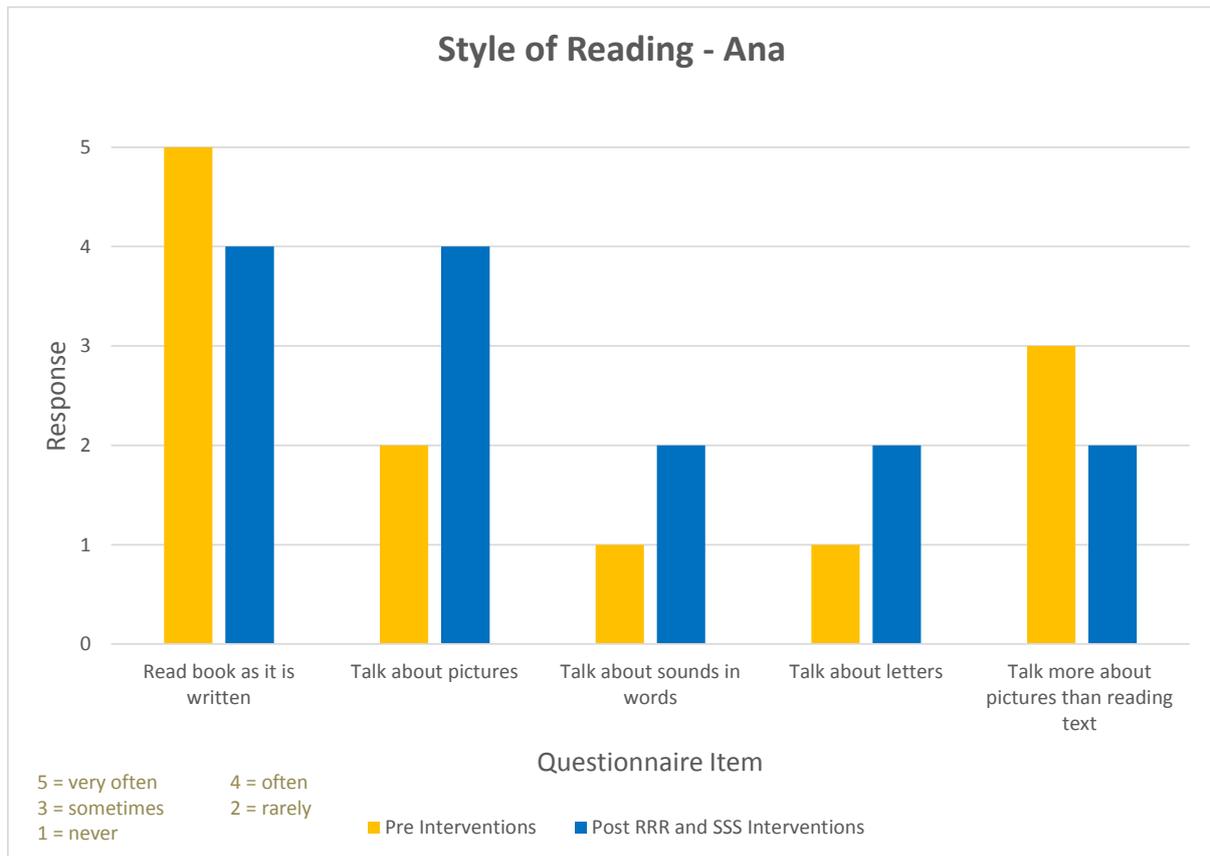


Figure 16. Style of Reading – Ana

Ana’s whānau is most likely to read the book as it is written, or to talk about the pictures in the book. A positive shift in the frequency they talk about sounds in words, and talk about letters, occurred post-intervention. However, Ana’s whānau uses these styles ‘rarely’. The most significant positive shifts post-intervention occurred in the range of literacy activities Ana’s whānau engages in, which are represented in Fig. 17.

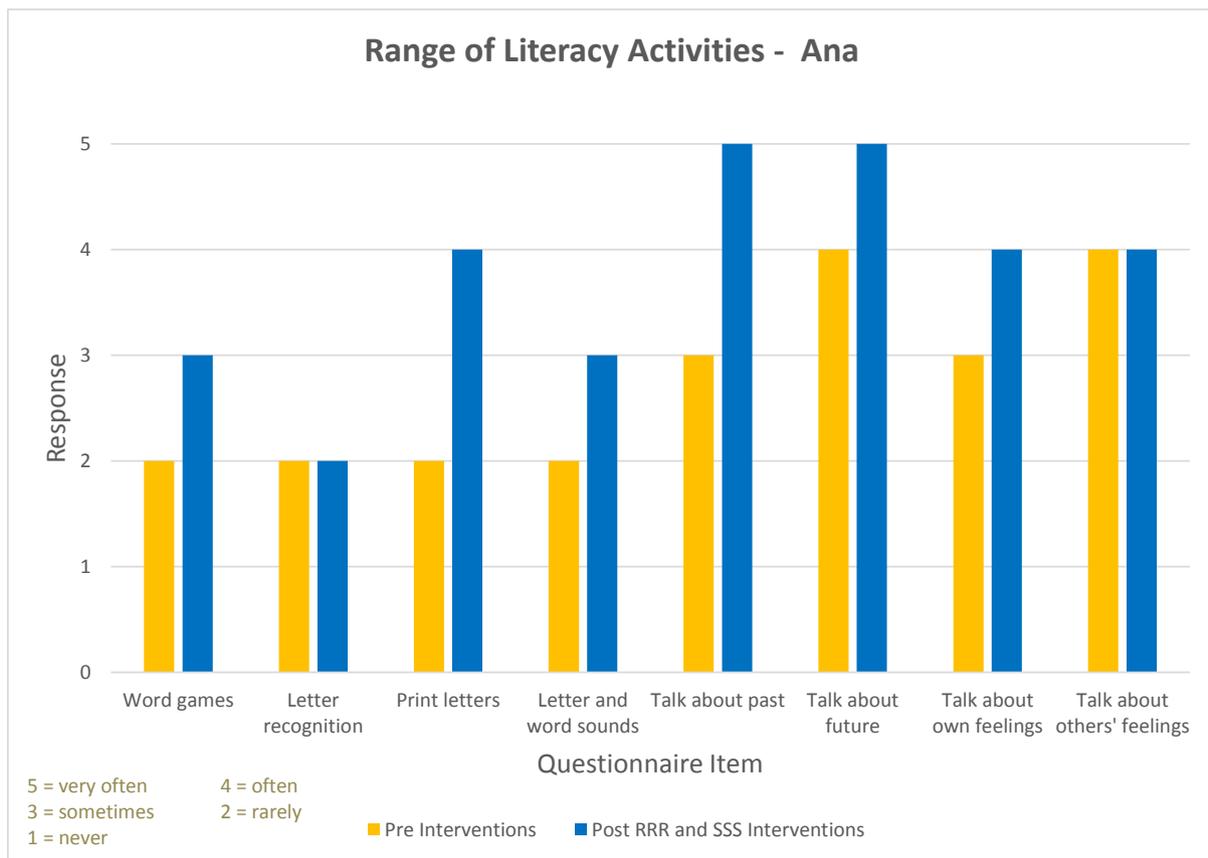


Figure 17. Range of Literacy Activities – Ana

Ana’s mother reported a positive shift in their frequency of engagement with every literacy activity, excluding letter recognition, and talking about others’ feelings, both of which remained the same when compared with pre-intervention responses. The most substantial positive changes occurred in how frequently they practise printing letters, and talking about the past, with smaller positive movement evident in the remaining activities, most of which moved from ‘rarely’ to ‘sometimes’. The next section presents data sets generated by Ana’s whānau reading samples.

#### 4.5.2 Whānau Reading Samples Data

Table 6 shows the analysis of extra-textual utterances across the three reading samples collected pre-, mid-, and post-intervention with Ana and her mother. Ana’s whānau completed the RRR part of the intervention first, and following that, the SSS activities. At each data collection point, Ana’s mother read her the English version of the story.

<b>ACTIVITY</b>	<b>T1</b>	<b>T2</b>	<b>T3</b>
<b>Total utterances (mother)</b>	1	2	9
<b>Total utterances (child)</b>	0	3	8
<b>Read text of book only</b>	Yes	Yes	Yes
<b>Refers to pictures</b>	0	0	3
<b>Refers to sounds</b>	0	0	0
<b>Refers to letters</b>	0	0	0
<b>Asks question (mother)</b>	0	0	0
<b>Asks question (child)</b>	0	0	7
<b>Answers question (mother)</b>	0	0	4
<b>Answers question (child)</b>	0	0	0

*Table 6. Whānau Reading Samples Analysis – Ana*

Ana’s mother tended to read the story as it was written, and this did not change as the intervention progressed. Ana asked some questions during shared book reading, and both her utterances, and those of her mother, increased mid- and post-intervention. Ana’s mother also made some references to the illustrations in the book she read during post-intervention data collection. The final part of this section presents data related to the level of engagement in the intervention of Ana’s whānau, and their evaluation of the intervention itself.

#### 4.5.3 Intervention Engagement and Evaluation Data

Ana’s whānau used both English and te reo Māori during the course of the intervention, reading the English books 70 per cent of the time, and the te reo Māori books for the remaining 30 per cent. Similarly, her whānau completed the activities in English 75 per cent of the time, and in te reo Māori 25 per cent of the time. Ana’s whānau had a 25 per cent engagement rate across the intervention, missing nine weeks due to sickness, travel out of town, or other commitments. Ana’s mother

rated both Ana and her whānau's enjoyment of the intervention as '4', and particularly enjoyed having conversations about things that occurred in the past. This is reflected in the results shown in Fig. 17 under the corresponding category. Ana's mother found it difficult to keep up with the reading, and this is also evident in their engagement rate with the intervention.

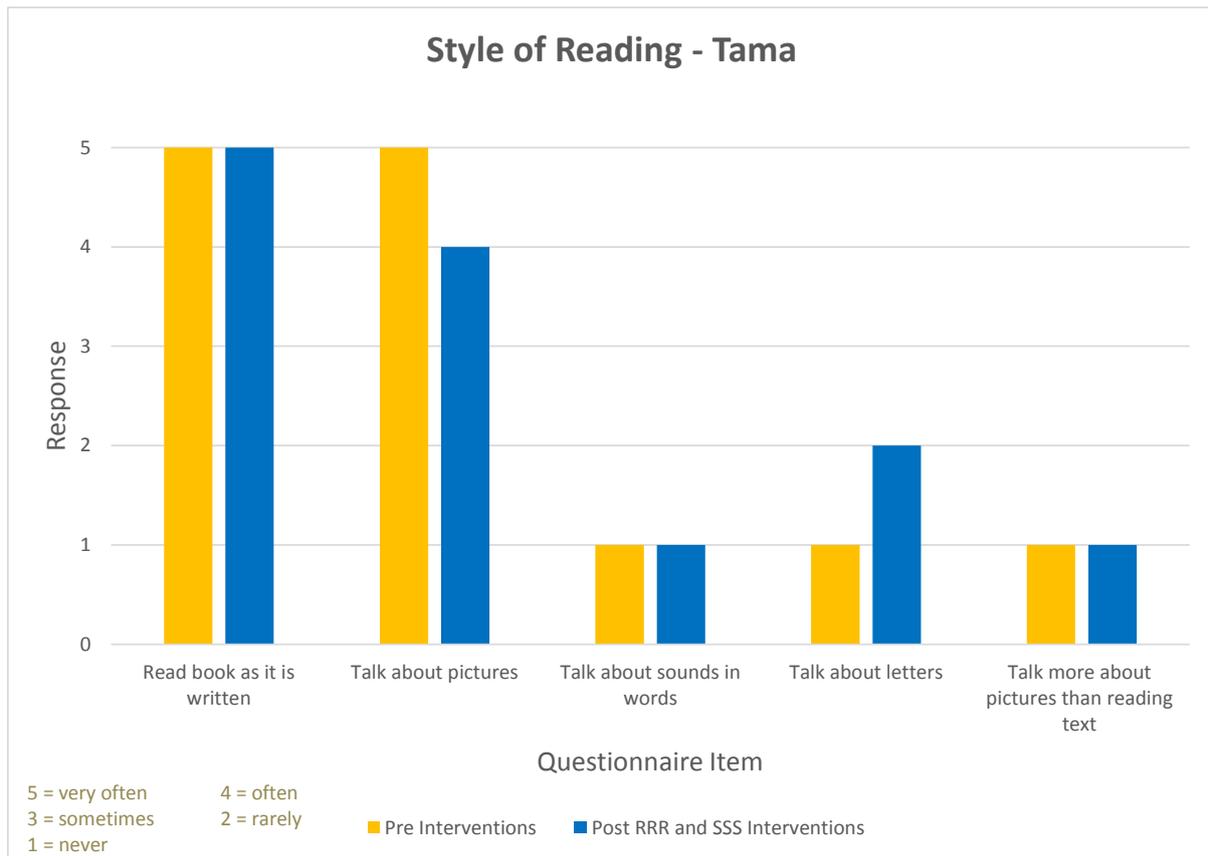
## **4.6 Tama**

This section reveals some of the home literacy practices of Tama and his whānau.

### 4.6.1 Questionnaire Data

Tama's mother reported that Tama has a relatively low level of interest in reading pre- and post-intervention, noting he is 'not very interested' in shared book reading, and 'not at all interested' in reading alone. However, his interest in what other members of his whānau may be reading increased from 'not at all interested' pre-intervention, to 'quite interested' post-intervention. Tama and his whānau engage in shared book reading 'less than once a week', and this was the response pre- and post-intervention. He was more likely to see other members of his whānau reading post-intervention ('7 or more times per week') compared to pre-intervention ('1-2 times per week'). Tama's mother indicated they undertake shared book reading 'less than once a week' but when this response is compared with the responses to the types of books Tama is read – where, for each type of book, Tama's mother responded 'never' both pre- and post-intervention – it is possible Tama's whānau reads together very infrequently.

However, on the occasions Tama's whānau engages in shared book reading, there is some degree of variation in the range of reading styles his whānau use, which is represented in Fig. 18.



*Figure 18.* Style of Reading – Tama

Tama’s whānau is most likely to read a book as it is written, or to talk about the illustrations in a book. References to sounds in words, letters, or placing greater emphasis on the pictures as opposed to the text are rare. There was little change in behaviour post-intervention compared to pre-intervention. However, more noticeable shifts occurred post-intervention in family literacy activities beyond that of shared book reading, and these changes are illustrated in Fig. 19.

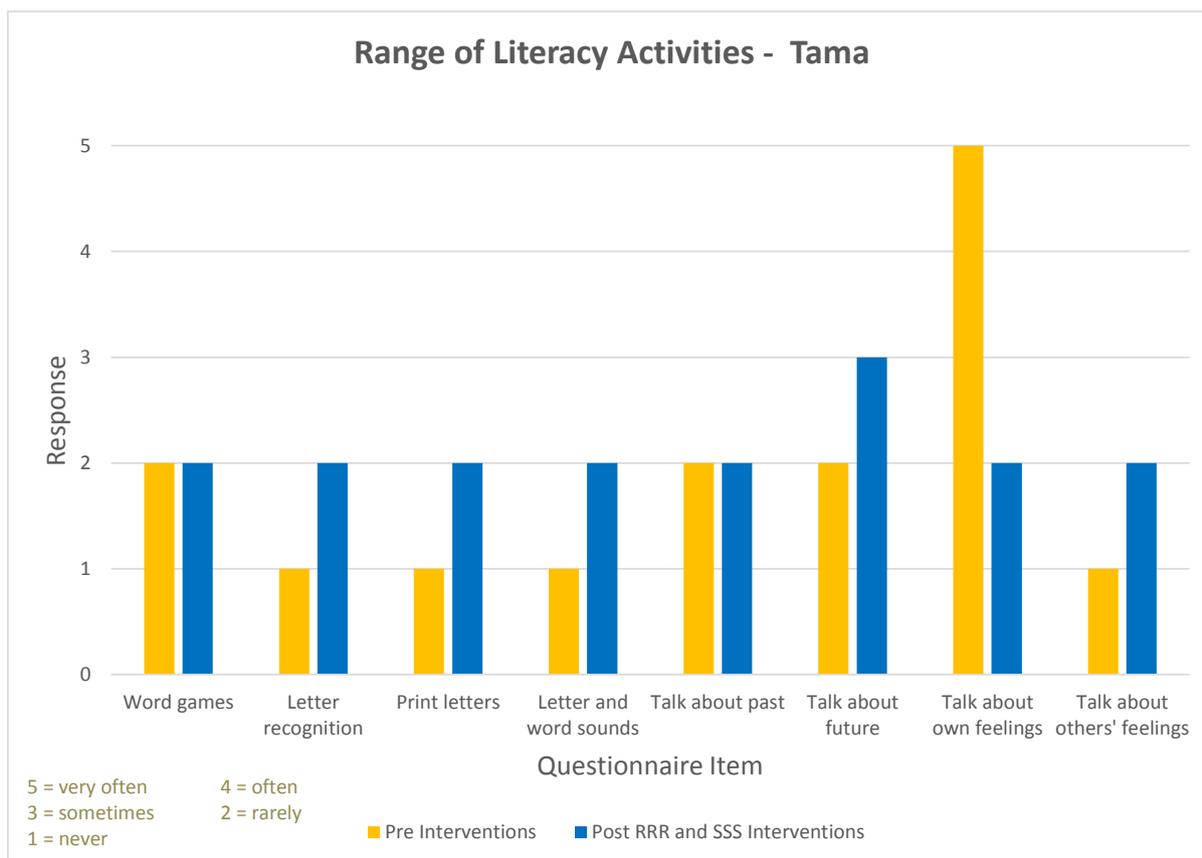


Figure 19. Range of Literacy Activities – Tama

Tama’s mother indicated that, pre-intervention, nearly half of these activities ‘never’ occur in their whānau, whereas post-intervention, Tama’s whānau engaged in all of these activities to some extent. Pre-intervention, they discussed Tama’s feelings ‘very often’, and this shifted post-intervention to ‘rarely’. The following section presents data sets generated by Tama’s whānau reading samples gathered at the various stages of data collection.

#### 4.6.2 Whānau Reading Samples Data

Table 7 illustrates the analysis of extra-textual utterances across the three reading samples collected pre-, mid-, and post-intervention with Tama and his mother. Tama’s whānau completed the RRR portion of the intervention first, and following that, the SSS activities. At each data collection point, Tama’s mother read him the te reo Māori version of the story.

ACTIVITY	T1	T2	T3
Total utterances (mother)	40	15	48
Total utterances (child)	22	7	38
Read text of book only	No	No	No
Refers to pictures	8	6	10
Refers to sounds	0	0	1
Refers to letters	0	0	1
Asks question (mother)	1	5	3
Asks question (child)	5	0	3
Answers question (mother)	5	0	2
Answers question (child)	0	2	2

*Table 7. Whānau Reading Samples Analysis – Tama*

Tama’s mother was the only mother to read the te reo Māori books to their child during shared book reading, which was a decision made by Tama. Despite the challenges associated with reading in a language his mother had lower levels of proficiency in, the patterns reveal Tama’s mother referred to sounds in words after completing the SSS portion of the intervention, and she remained interactive during each shared book reading session. Tama was also engaged in the stories, and both asked and answered a reasonable number of questions. The following part of this section presents data related to the level and manner of engagement in the intervention of Tama’s whānau, and their evaluation of the intervention overall.

#### 4.6.3 Intervention Engagement and Evaluation Data

Tama’s whānau engaged with the intervention in both English and te reo Māori, and was the only whānau to use te reo Māori more often than English. For both the shared book reading, and the activities, Tama’s whānau used English 47.2 per cent of the time, and te reo Māori 52.8 per cent of the time. They had a 92 per cent

engagement rate in the intervention, missing one week when Tama was unwell. Tama's mother rated both Tama and his whānau's enjoyment of the intervention as '3', and observed Tama viewed the reading as a chore, often losing interest after the first book. His mother enjoyed interacting with Tama in a different way, and hearing his thoughts on the books they read. She also noticed his skills in identifying rhyming words improved. She believes it was a valuable study to participate in prior to Tama starting school, because of the foundation it provided him in skills associated with reading and story comprehension.

#### **4.7 Hine**

This section offers some insight into the literacy practices of the home environment of Hine.

##### 4.7.1 Questionnaire Data

Hine's mother reported that Hine has a high level of interest in reading pre- and post-intervention. She noted her interest in shared book reading as 'very interested', and her interest in reading alone as 'quite interested'. Her interest in what other members of her whānau may be reading shifted from 'not very interested' pre-intervention, to 'not at all interested' post-intervention. Hine's whānau take part in shared book reading '3-4 times per week', and Hine observes other members of her whānau reading '3-4 times per week'. These responses remained the same pre- and post-intervention.

During shared book reading, Hine is exposed to a range of books, mostly rhyming books, and non-rhyming books, both of which she is read 'often'. She is 'rarely' read alphabet books, and the only shift in responses occurred with regard to non-fiction picture books, which she is read 'sometimes' and 'rarely' pre- and post-intervention, respectively. Hine's whānau employ a range of reading styles when they are reading with Hine, and this is depicted in Fig. 20 below.

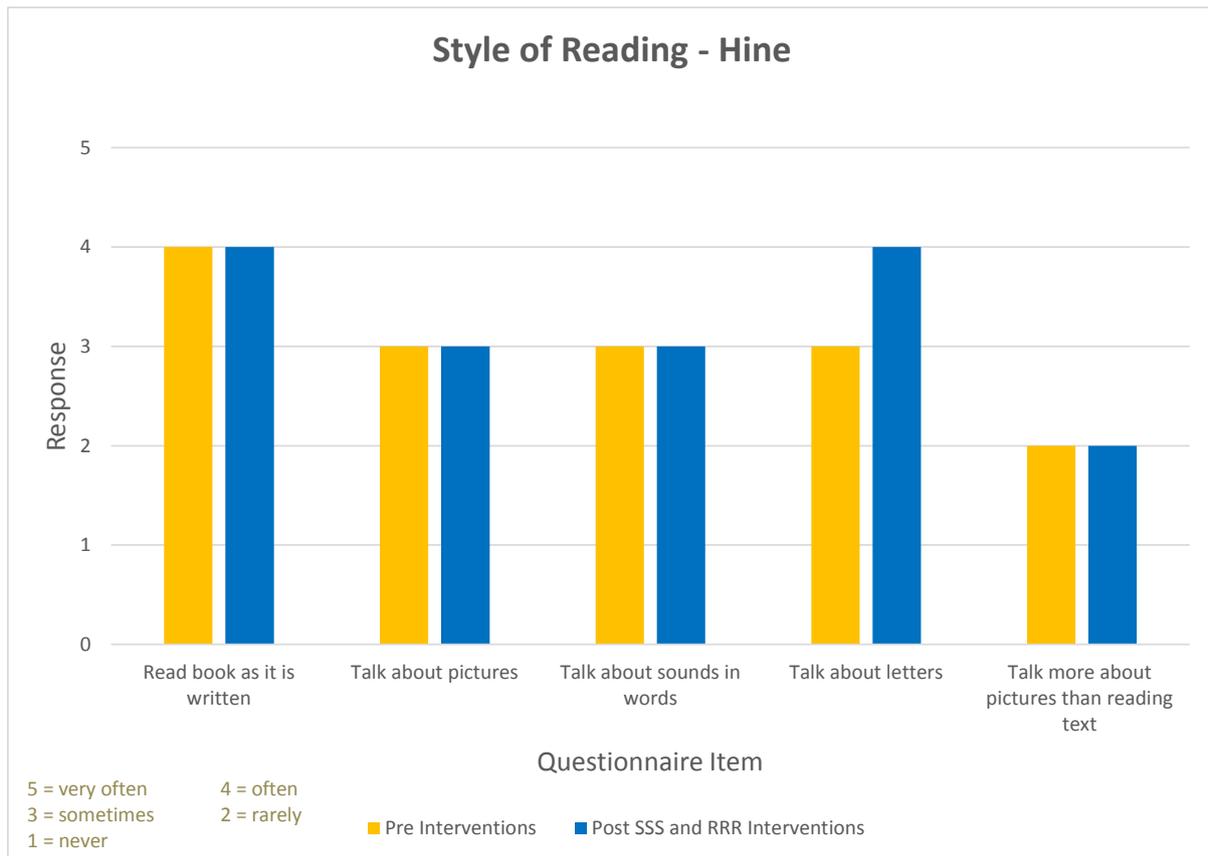


Figure 20. Style of Reading – Hine

Hine’s whānau is mostly likely to read the book as it is written, and ‘sometimes’ references are made to the illustrations in the books, or to various sounds in words. They are more likely to talk about letters post-intervention than they were pre-intervention. In addition to shared book reading, Hine’s whānau participates in a range of other literacy activities, which encourage the development of her foundational literacy skills. Hine’s mother’s responses to the questions related to literacy activities in the home are represented in Fig. 21.

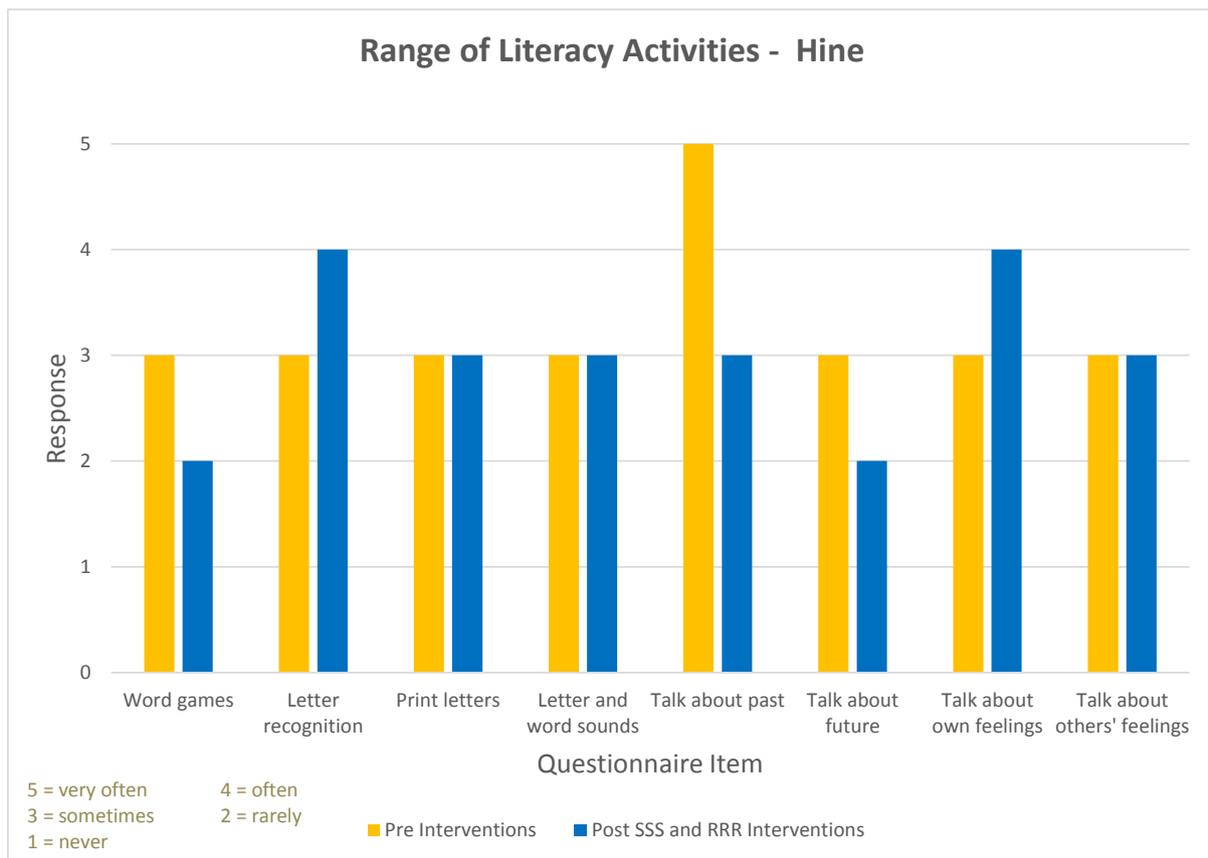


Figure 21. Range of Literacy Activities – Hine

Hine participates in most literacy activities beyond shared book reading ‘sometimes’. Post-intervention, Hine’s whānau played word games less frequently, and talked about the past and the future less often. However, they were more likely to encourage Hine to recognise letters, and to talk about her own feelings post-intervention than they were pre-intervention. The next section presents data sets generated by Hine’s whānau reading samples.

#### 4.7.2 Whānau Reading Samples Data

Table 8 depicts the analysis of extra-textual utterances across the three reading samples collected pre-, mid-, and post-intervention with Hine and her mother. Hine’s whānau completed the SSS portion of the intervention first, and following that, the RRR activities. At each data collection point, Hine’s mother read her the English version of the story.

<b>ACTIVITY</b>	<b>T1</b>	<b>T2</b>	<b>T3</b>
<b>Total utterances (mother)</b>	52	23	40
<b>Total utterances (child)</b>	38	12	27
<b>Read text of book only</b>	No	No	No
<b>Refers to pictures</b>	10	4	17
<b>Refers to sounds</b>	0	5	0
<b>Refers to letters</b>	0	0	2
<b>Asks question (mother)</b>	13	9	15
<b>Asks question (child)</b>	4	0	0
<b>Answers question (mother)</b>	3	0	0
<b>Answers question (child)</b>	10	4	12

*Table 8. Whānau Reading Samples Analysis – Hine*

Hine’s mother read the English books with Hine during each shared book reading session, however, she interspersed her comments in English with phrases, words, and questions in te reo Māori, which included: “He aha tēnei?” (‘What is this?’), and “Titiro ki tēnei” (look at this), among others. She often referred to the illustrations in the books but patterns reveal this increased significantly following their completion of the RRR portion of the intervention. Similarly, after Hine and her whānau participated in the SSS activities, the number of times Hine’s mother referred to sounds in words increased also. Hine’s mother asked a reasonably high number of questions during shared book reading pre-intervention, and this remained evident mid- and post-intervention. The final part of this section presents data related to the manner and level of engagement in the intervention of Hine’s whānau, and their evaluation of the intervention itself.

### 4.7.3 Intervention Engagement and Evaluation Data

Hine's whānau participated in the intervention using both English and te reo Māori. They read the English books 60.7 per cent of the time, and the te reo Māori books the remaining 39.3 per cent. Similarly, they engaged in the activities using English 55.2 per cent of the time, and in the te reo Māori activities 44.8 per cent of the time. Hine's whānau had a 58 per cent engagement rate with the intervention, and were unable to complete five weeks of activities and book reading due to two trips out of town, and other commitments. Hine's mother rated both the whānau and Hine's enjoyment of the study as '4'. Her mother mostly enjoyed learning new ways of reading with Hine, and found the sticker prompts in the books helpful. During busy weeks, she found it difficult to find time to read the books, and complete the activities. However, she noticed the more interactive she was when reading with Hine, the more Hine responded in a similar way. As a whānau, Hine's mother believes they are more aware of creating opportunities to engage Hine in interactive conversations, and she feels that their participation in the study has provided a good foundation for Hine when she starts school.

## **4.8 Aroha**

The final section of this chapter offers some insight into the home literacy practices of Aroha and her whānau.

### 4.8.1 Questionnaire Data

Aroha's mother indicated Aroha has a high level of interest in reading, particularly in shared book reading. Pre- and post-intervention respectively, Aroha was 'very interested' in reading with her whānau, was 'not very interested' in reading alone, and was 'not at all interested' in what other members of her whānau may be reading. Pre-intervention, Aroha's whānau participated in shared book reading '1-2 times per week', compared with 'less than once a week' post-intervention. She observed other members of her whānau reading '7 or more times per week' pre-intervention, and '1-2 times per week' post-intervention.

Aroha is exposed to a variety of books in her home, although her mother noted they read the majority of these 'rarely'. When these responses are considered alongside her mother's indication that shared book reading occurs in their home post-

intervention 'less than once a week', it is likely that reading books together occurs reasonably infrequently rather than it being about the types of books read. Interestingly, Aroha's mother noted that, pre-intervention, Aroha was read rhyming books, and alphabet books 'often', and non-rhyming books 'sometimes'. However, post-intervention, these books were read 'rarely' with Aroha.

On the occasions Aroha's whānau engages in shared book reading, Aroha is read to using a variety of different styles, which are illustrated in Fig. 22 below.

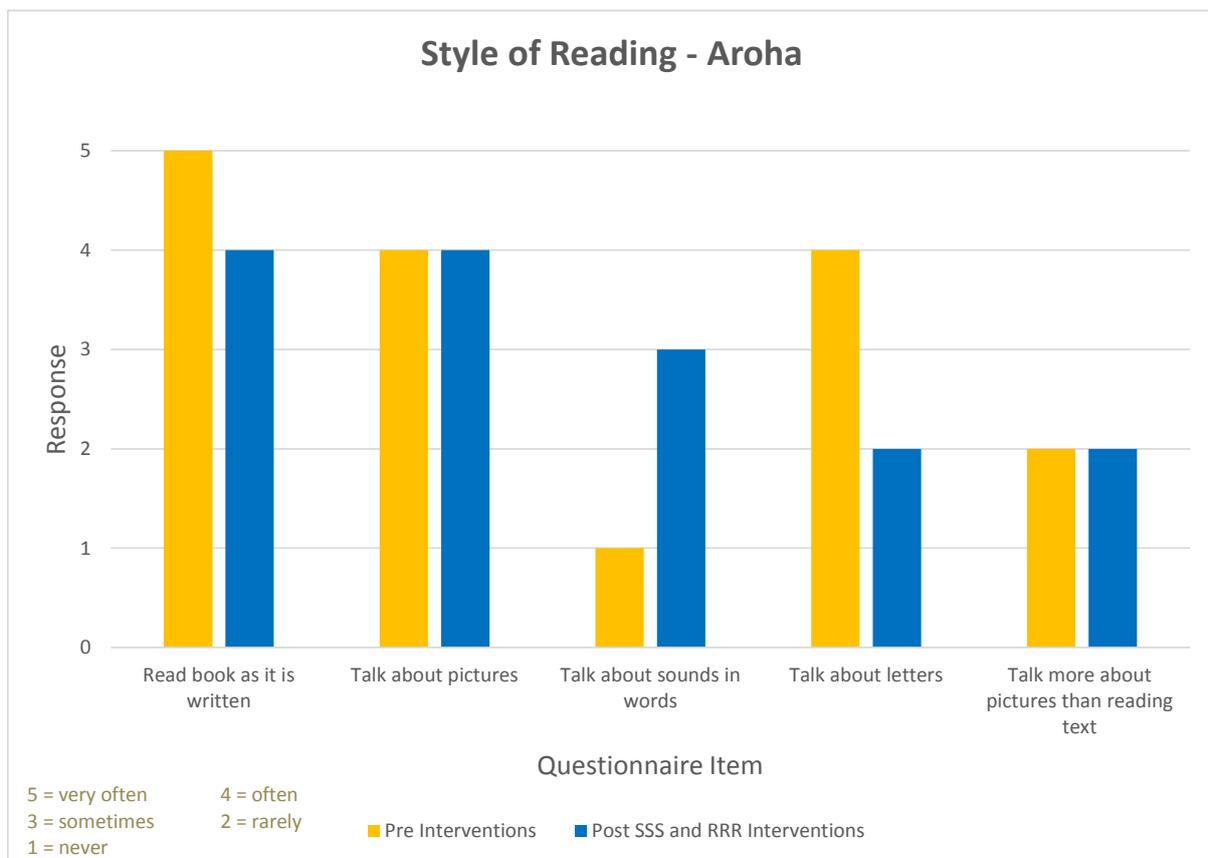


Figure 22. Style of Reading – Aroha

Pre-intervention, Aroha's whānau was more likely to read the book as it is written than they were post-intervention. They 'often' talk about the pictures in the book, although references to letters shifted from occurring 'often' pre-intervention, to occurring 'rarely' post-intervention. A more noteworthy change is that Aroha's whānau 'never' talked about the sounds in words pre-intervention, however, post-intervention pointed out sounds in words 'sometimes'. These results correspond with

some of the responses to the questions relating to the range of literacy activities that are undertaken in Aroha’s home literacy environment, which are depicted in the following graph (Fig. 23).

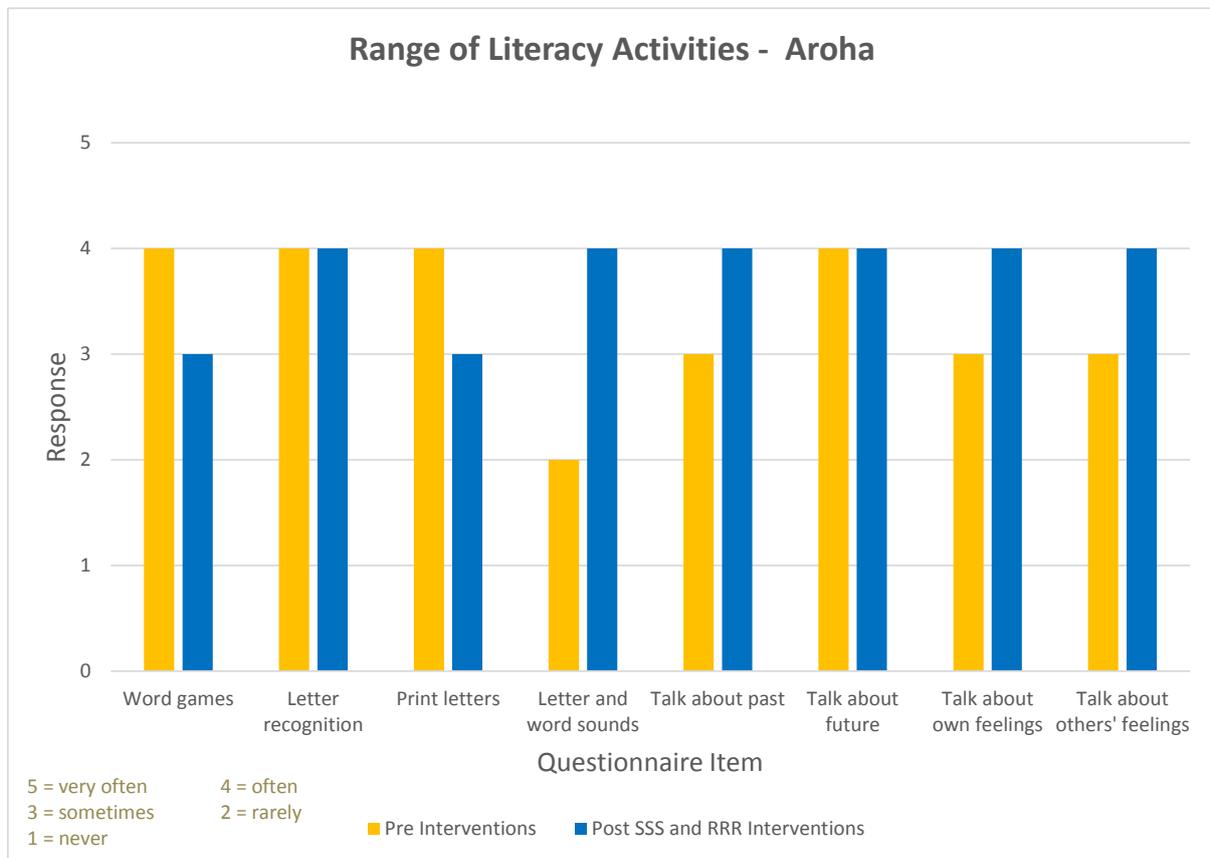


Figure 23. Range of Literacy Activities – Aroha

Aroha’s whānau were less likely to talk about letters in books post-intervention, and similarly, they were less likely to encourage Aroha to practise printing letters post-intervention than they were pre-intervention. However, they are more likely to point out letter sounds and the sounds in words post-intervention, than they were pre-intervention, which corresponds with a shift in their style of reading represented in Fig. 22. Conversations about the past, future, and Aroha’s own, as well as others’ feelings, were also more likely to occur post-intervention compared with pre-intervention. The next section presents data sets generated by the whānau reading samples provided by Aroha’s mother at the various stages of data collection.

#### 4.8.2 Whānau Reading Samples Data

Table 9 depicts the analysis of extra-textual utterances across the three reading samples collected pre-, mid-, and post-intervention with Aroha and her mother. Aroha’s whānau completed the SSS portion of the intervention first, and following that, the RRR activities. At each data collection point, Aroha’s mother read her the English version of the story.

ACTIVITY	T1	T2	T3
Total utterances (mother)	11	14	26
Total utterances (child)	5	6	9
Read text of book only	No	No	No
Refers to pictures	6	4	8
Refers to sounds	0	0	0
Refers to letters	0	0	0
Asks question (mother)	1	3	7
Asks question (child)	3	0	1
Answers question (mother)	3	0	1
Answers question (child)	1	3	2

Table 9. Whānau Reading Samples Analysis – Aroha

Aroha’s mother had a reasonably interactive reading style pre-intervention, making reference to the illustrations in the books, and asking Aroha questions during shared book reading. These features of her reading style were improved on mid- and post-intervention. Similarly, Aroha was quite engaged during each shared book reading session, asking her mother some questions, and answering questions posed to her. Following the RRR component of the intervention, Aroha’s mother was more likely to talk about the illustrations in the book, and asked a greater number of questions during shared book reading. The final part of this section presents data related to

the manner and level of engagement in the intervention of Aroha's whānau, and their evaluation of the intervention overall.

#### 4.8.3 Intervention Engagement and Evaluation Data

Like the other whānau participating in this study, Aroha's whānau engaged in the intervention using both English and te reo Māori. They read the English books 60.7 per cent of the time, and the te reo Māori books 39.3 per cent of the time. Similarly, they completed the activities in English 63 per cent of the time, and the activities in te reo Māori the remaining 37 per cent. Aroha's whānau had a 75 per cent engagement rate with the intervention, and missed three weeks due to a vacation, and to other commitments.

Aroha's mother rated the whānau and Aroha's enjoyment of the intervention as a '5'. She particularly enjoyed watching Aroha learn, and benefit from the activities. She became more aware of the frequency with which they undertake shared book reading in their whānau. As a result of the intervention, Aroha's mother observed Aroha has improved skills in recognising rhyming words, including in everyday conversation. She found the te reo Māori books challenging but ultimately feels Aroha has accrued many benefits from participating in this study.

### **4.9 Summary**

The intention of this chapter was to shed light on the home literacy practices of each whānau participating in this study, with the aim of establishing some understanding of the home environment in which the children's foundational literacy is emerging. Additionally, this chapter sought to provide some insight into the influence whānau literacy practices may have on the children's literacy development, as well as explore how the intervention may have shifted some of those literacy practices. In keeping with both a Māori worldview, together with the research design, and aspects of the theoretical frameworks underpinning this research, the data related to each child and their whānau was presented in a section of its own.

Each section was divided into three parts, and addressed particular categories of the data sets collected pre-, mid-, and post-intervention. The first part presented the findings of the questionnaires conducted with whānau pre- and post-intervention, the second part discussed the analysis of the whānau reading samples, and the final

part of each section depicted the manner and level of engagement of each whānau, together with their evaluation of the intervention. In addition to shedding light on the literacy practices of each whānau participating in this study, this chapter had a secondary purpose, which was to provide some contextual insight into how the home environment may influence the emerging literacy skills of the children participating in this study. Therefore, this chapter acts as another lens through which to view and interpret the data sets presented in the following two chapters of this work.

At the outset of this chapter, the question: ‘How has the intervention impacted on the literacy practices of each whānau?’ was posed. The data sets presented in the sections above offer some answers to this question, and patterns reveal that, in the case of each whānau, the activities associated with both the RRR and SSS components of the intervention resulted in positive shifts in literacy practices, particularly in the reading style employed by the mothers – with the exception of Ana’s mother. The crossover design utilised in this study reveals clearly the impact of each part of the intervention. For example, trends indicate that whānau who completed the RRR portion of the intervention first were more likely to refer to the pictures in books, or to ask questions during shared book reading, at the mid-intervention data collection point. Conversely, whānau who engaged with the SSS component of the intervention first pointed out sounds in words at a higher rate mid-intervention than the other whānau did. Whānau also reported anecdotal evidence of an increased level of interest in reading, and of a higher level of engagement in games that numerous scholars contend stimulate children’s emerging literacy skills.

In closing, this chapter contributes to the overall thesis in two ways. Firstly, it provides some insight into the secondary line of enquiry of this study, specifically an exploration of whānau literacy practices in the home. And secondly, it contributes to answering the overarching research question in this research by detailing the engagement of whānau in the intervention, and by shedding some light on how whānau literacy practices may have been influenced by the activities completed during the intervention. The findings presented in this chapter, together with those discussed in Chapters Five and Six, will be analysed in depth in Chapter Seven of this thesis, using the various lenses for analysis which were established in Chapters Two and Three of this work. The following chapter presents data associated with the phonological awareness skills of the children participating in this research.

## **CHAPTER FIVE: PHONOLOGICAL AWARENESS**

The primary function of this chapter is to explore data sets from the various phases of the study which provide some insight into the phonological awareness skills of each child participating in this research. It was acknowledged in Chapter Two of this work that many researchers contend phonological awareness is the best single predictor of reading performance (Bird et al., 1995; Gillon, 2018; Liberman et al., 1989; Lundberg et al., 1980; Mann, 1991; Torgesen et al., 1994), and for this reason, it is a crucial consideration in this study. The previous chapter presented numerous series of data related to whānau literacy practices. These data sets included the findings of a questionnaire conducted with whānau pre- and post-intervention, analysis of the whānau reading samples collection pre-, mid-, and post-intervention, and whānau engagement in and evaluation of the intervention. This chapter builds on the preceding one by continuing to offer some understanding of the children's foundational literacy skills, and the influence of the home literacy environment, together with the activities completed during the intervention, on the cognitive skills of each child, which are critical for early literacy success. Chapter Four serves a secondary purpose in this thesis, specifically it acts as an additional lens through which to view and interpret the findings presented in Chapters Five and Six of this work. Therefore, data sets concerning the phonological awareness skills of the children are analysed through the contextual understanding offered in the previous chapter with regard to the home literacy environment and literacy practices of the whānau participating in this research.

Like Chapter Four, this chapter is divided into eight sections, with the results of each child presented in a section of its own. Again, this is to ensure alignment with the holistic tendencies of a general Māori worldview, and to locate the findings in the theoretical framework established in Chapter Three of this work. Each section is divided into two parts. The first part presents the results of the IPI English and IPI Māori tasks, which each child completed pre-, mid-, and post-intervention, as well as at a final data collection round conducted six months after the intervention had finished. The second portion of each section describes the findings of the SA English and SA Māori tasks, which were carried out at the same collection points as the IPI tasks. In each graph, results outside the two standard deviation bar, represented in the graphs by two blue lines, are significantly different to pre-intervention findings, according to the two standard deviation band method. The findings presented in

Chapter Five, together with those discussed in the preceding and subsequent chapters, are analysed in depth in Chapter Seven of this thesis, using the various analytical lenses that were constructed in Chapters Two and Three of this work. The first section of this chapter depicts data related to Atawhai.

## 5.1 Atawhai

This section reveals the findings of Atawhai's IPI and SA tasks in both English and te reo Māori.

### 5.1.1 Initial Phoneme Identification Results

The following graph (Fig. 24) shows the results of Atawhai's IPI assessment tasks in English pre-, mid-, and post-intervention.

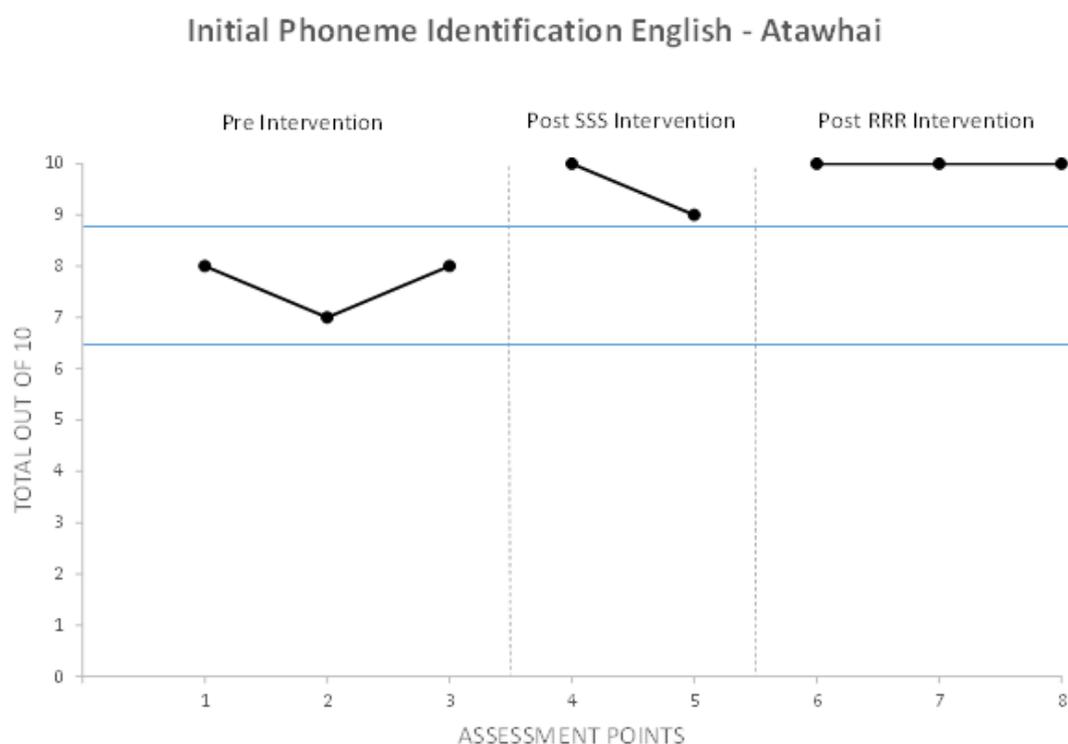


Figure 24. Initial Phoneme Identification English – Atawhai

Atawhai's skills in identifying the initial sound in English words pre-intervention were well-developed. Prior to completing the intervention, the home literacy

environment of Atawhai, described in Chapter Four, indicates the shared book reading, and other literacy activities her whānau participate in may have fostered the development of these skills in English.

Her whānau completed the SSS portion of the intervention first, and these activities created a positive shift in her ability to identify the initial sound in each English test item. She maintained this improvement following the completion of the entire intervention, and at the six-month follow up point, this trend continued, with Atawhai scoring 10 out of 10 on this assessment task.

Atawhai’s mother revealed in the pre-intervention whānau interview that she has beginner level proficiency in te reo Māori, but has an intense desire to support her daughter in acquiring some understanding of the language. These statements and sentiments, together with the effort Atawhai’s whānau made to engage with the te reo Māori books and activities during the intervention, as presented in Chapter Four, are reflected in the results of the IPI Māori assessment tasks, completed with Atawhai pre-, mid-, and post-intervention. Fig. 25 illustrates these findings.

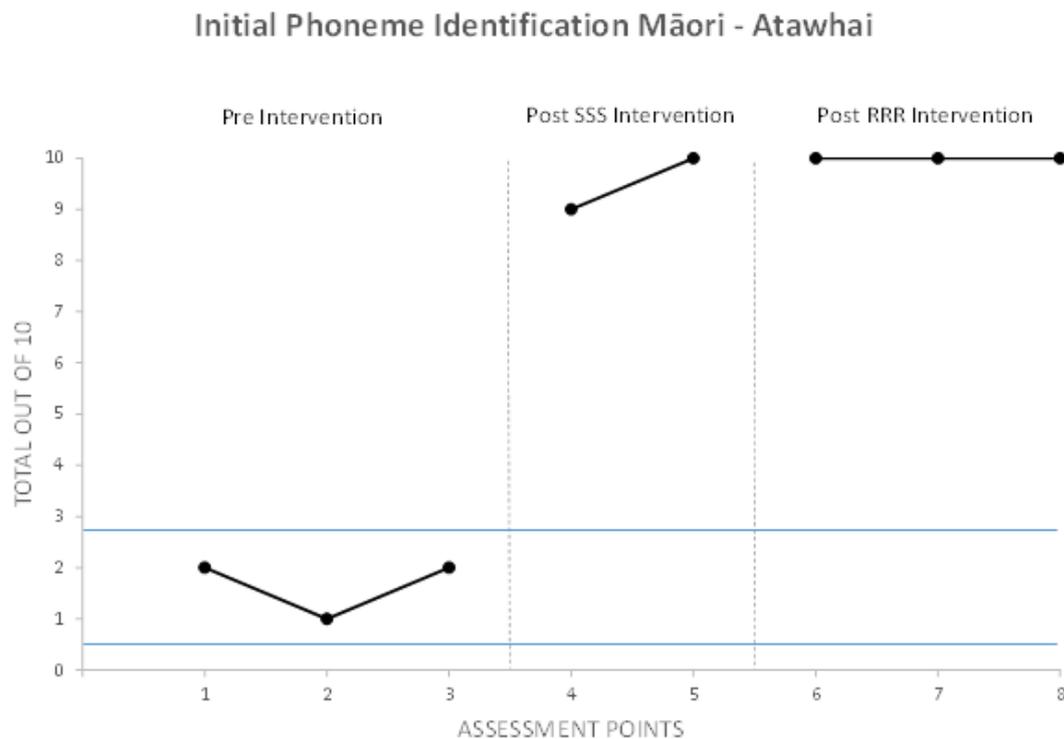


Figure 25. Initial Phoneme Identification Māori – Atawhai

Pre-intervention, Atawhai was exposed to comparatively little te reo Māori in the home, although her whānau ensured she heard as much as possible relative to the scope of their abilities. Data collected during the intervention revealed a substantial effort was made to engage with the te reo Māori books and activities, and this had a considerable impact on Atawhai’s ability to identify the initial sound in the te reo Māori words used in this assessment task. Post-intervention, her skills in te reo Māori were on par with her ability in English. Cummins (1981) contends that literacy instruction in one language supports successful literacy development in another language. Therefore, it is possible that Atawhai was able to transfer the well-developed skills in English phonological awareness she possesses into a te reo Māori context. Her improvement was maintained at the six-month follow up point, where she scored 10 out of 10 on this task. The next portion of this section presents data concerning Atawhai’s SA tasks in English and te reo Māori.

### 5.1.2 Syllable Assessment Task Results

The following graph (Fig. 26) shows the results of Atawhai’s SA tasks in English pre-, mid-, and post-intervention.

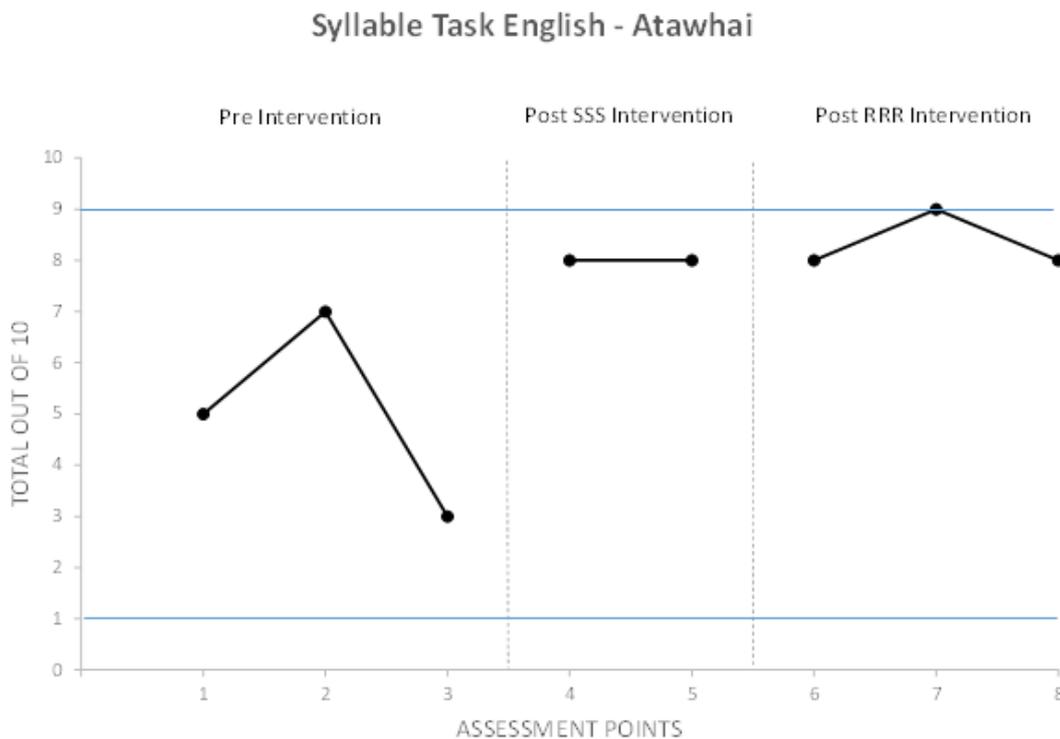


Figure 26. Syllable Assessment Task English – Atawhai

The results of Atawhai’s SA tasks in English show no gains above chance were made as a result of the intervention, although Atawhai did improve on her pre-intervention average score mid- and post-intervention. Atawhai generally struggled to segment one-syllable words, which, in almost every instance, she broke down into two syllables. However, interestingly, at the six-month follow up data collection round, she scored 10 out of 10 in this task. Fig. 27 presents the results of Atawhai’s ability to segment words into syllables using te reo Māori test items.

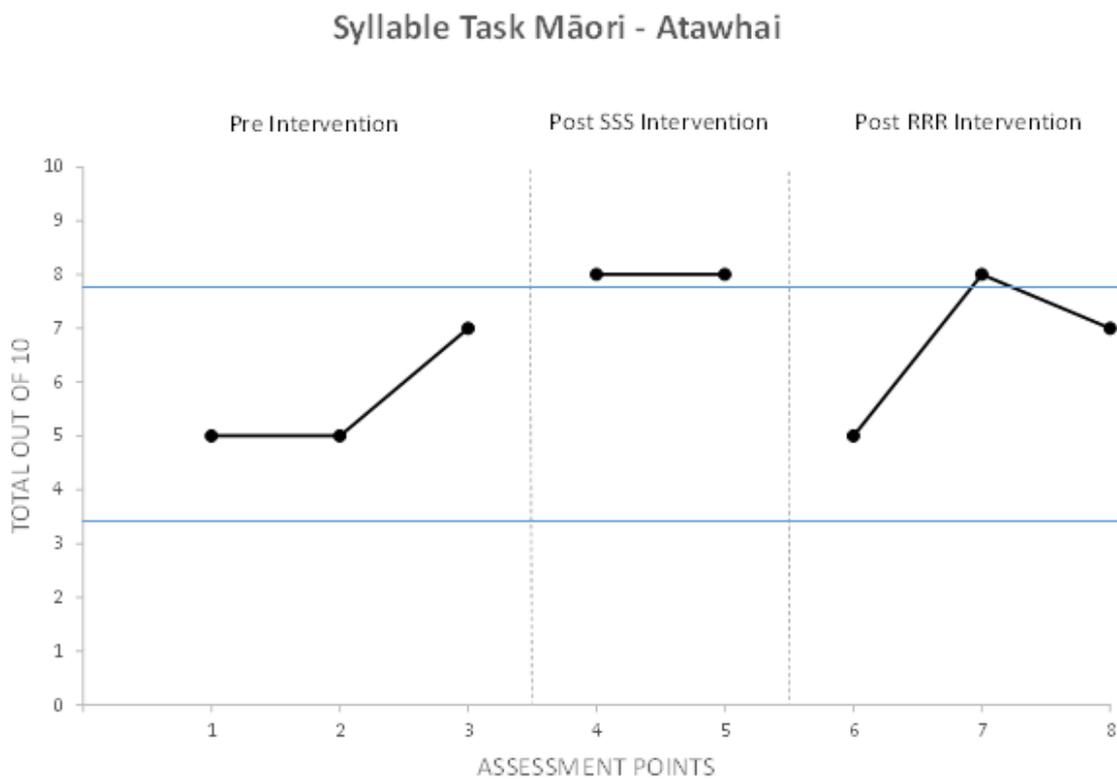


Figure 27. Syllable Assessment Task Māori – Atawhai

Atawhai’s ability to segment te reo Māori words into syllables followed a similar trend to her ability to break down English words, although following the completion of the SSS portion of the intervention, a positive shift, significantly above chance, occurred in Atawhai’s ability to perform these tasks, which is revealed in Fig. 27. These gains were not maintained on average post-intervention, although at the six-month post-intervention follow up, Atawhai scored 8 out of 10 on this assessment, again struggling with the one-syllable words.

## 5.2 Tia

This section depicts the findings of Tia’s IPI and SA tasks in English and te reo Māori.

### 5.2.1 Initial Phoneme Identification Results

The following graph (Fig. 28) shows the results of Tia’s IPI assessment tasks pre-, mid-, and post-intervention using English words.

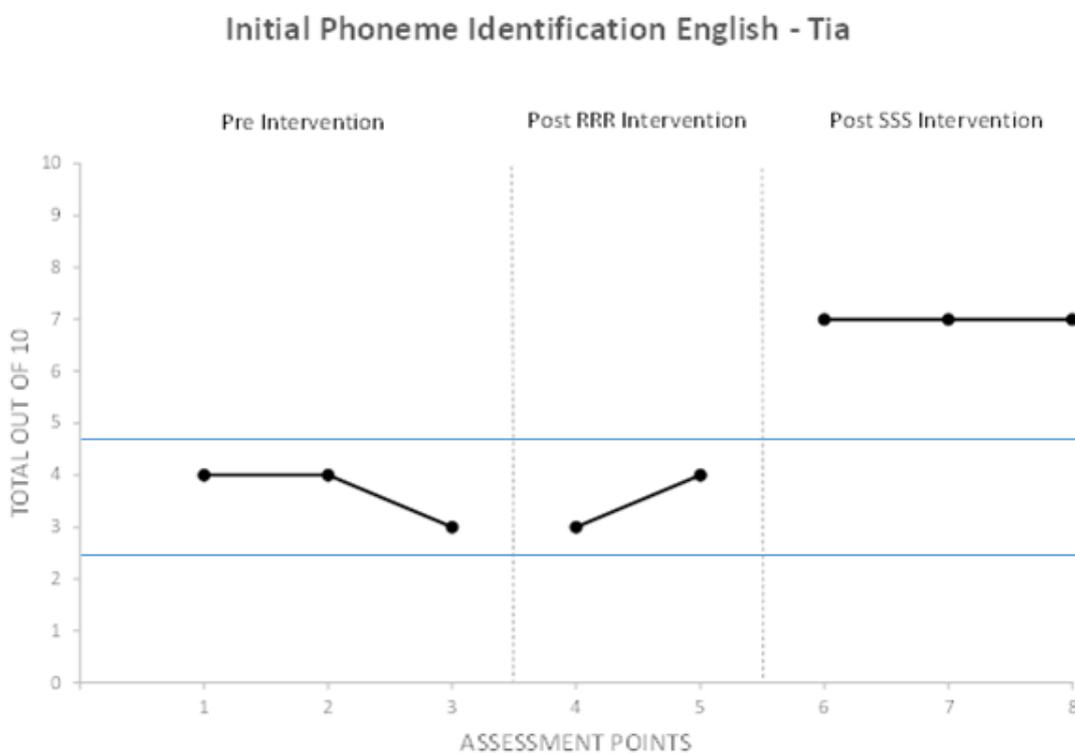


Figure 28. Initial Phoneme Identification English – Tia

Tia’s whānau completed the RRR portion of the intervention first, and this is revealed in the findings of the IPI assessment tasks completed with Tia pre-, mid-, and post-intervention. Fig. 28 indicates that Tia’s skills to identify the first sound in the English test items remained largely the same following her whānau completing the RRR part of the intervention. However, once they had completed the activities and shared book reading associated with the SSS portion of the intervention, Tia made gains significantly above chance concerning her ability to

identify the first sound in English words. The crossover design employed in this study allows for stronger conclusions to be drawn about the efficacy of the different aspects of the intervention in creating positive shifts in the cognitive skills critical for early literacy success, as evidenced by the results shown in Fig. 28. At the six-month post-intervention follow up, Tia scored 9 out of 10 in this assessment, indicating she continued to improve on the gains she made during the intervention. Fig. 29 below depicts the results of Tia’s ability to identify the first sounds in te reo Māori words.

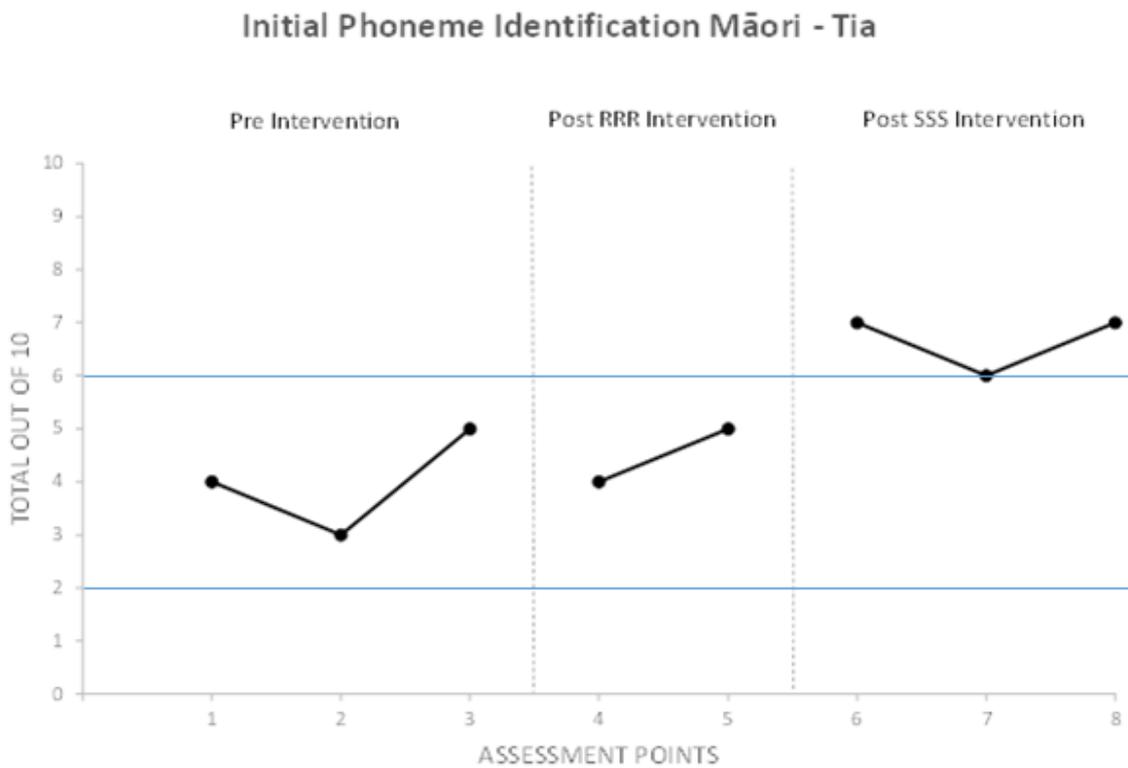


Figure 29. Initial Phoneme Identification Māori – Tia

Similar to the results illustrated by Fig. 28, this graph shows that Tia’s abilities at the pre-intervention round of assessments, and following the completion of the RRR portion of the intervention, remained largely unchanged. However, after her whānau participated in the SSS component of the intervention, a positive shift, significantly above chance, occurred in Tia’s ability to identify the first sound in the te reo Māori test items. Denton et al (2000) suggest that phonological processing skills acquired in one language can be applied to other languages. In other words, a child learns how languages in general work, and they develop strategies for

processing language, which can be applied to other languages. This contention is supported by the results depicted in Figs. 28 and 29, where the skills Tia consolidated in English were also strengthened in te reo Māori. Her improvement was maintained six months after the intervention concluded, with Tia scoring 8 out of 10 on these assessment tasks. The second portion of this section presents the results of the SA assessment tasks Tia completed in English and te reo Māori.

### 5.2.2 Syllable Assessment Task Results

The following graph (Fig. 30) shows the results of Tia’s SA tasks in English pre-, mid-, and post-intervention.

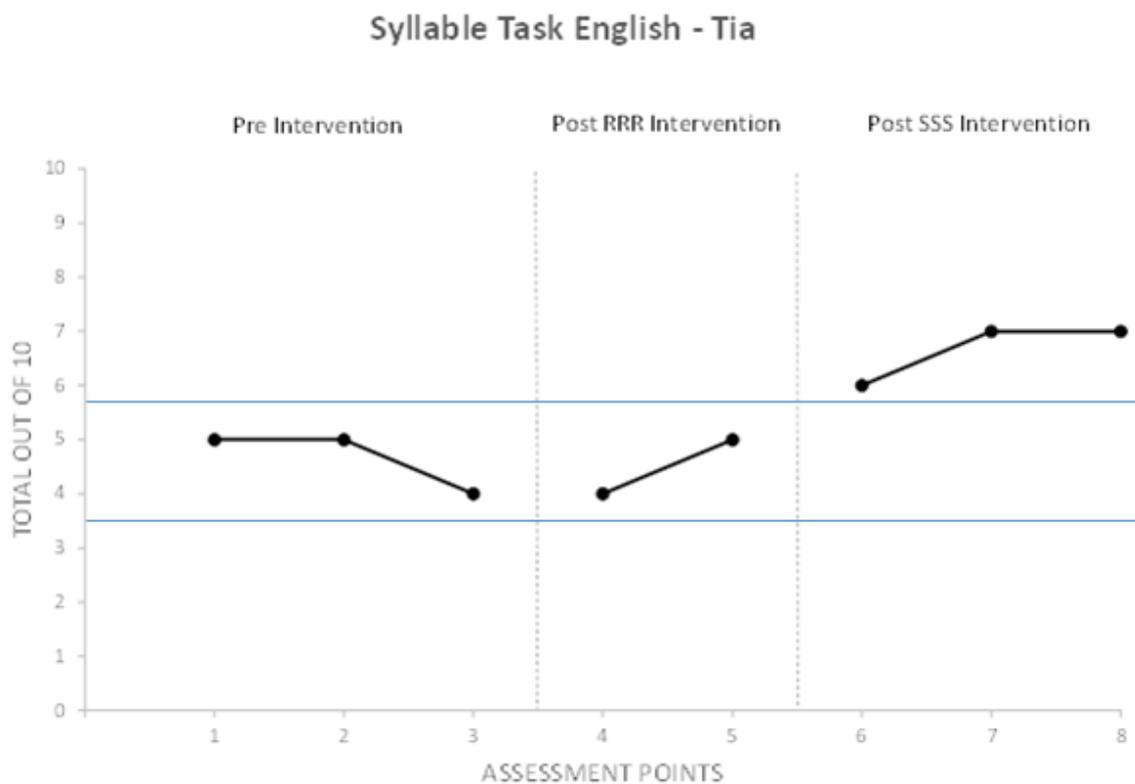


Figure 30. Syllable Assessment Task English – Tia

Following the trend evident in the results of the Tia’s IPI assessment tasks in both English and te reo Māori, Fig. 30 shows that Tia’s ability to segment English words into syllables remained largely unchanged from pre-intervention to the midway

point after her whānau completed the RRR portion of the intervention. However, post-intervention, a positive shift, significantly above chance, occurred in Tia’s ability to identify the number of syllables in English words, which like the results illustrated by Figs. 28 and 29, lends further weight to the effectiveness of the activities whānau completed during the intervention in supporting the foundational skills children need in order to experience early literacy success. At the six-month follow up data collection round, Tia scored 9 out of 10 on this assessment, indicating she continued to improve on the gains she made during the intervention. Fig. 31 presents the results of the SA tasks Tia completed using te reo Māori words.

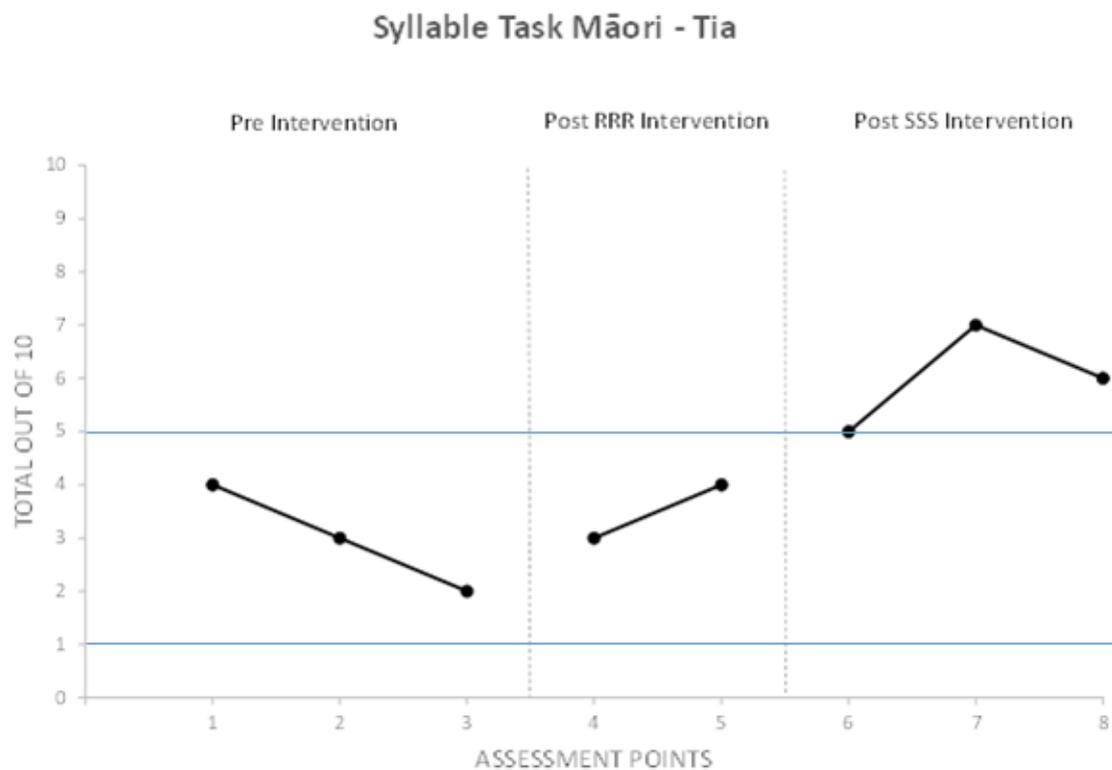


Figure 31. Syllable Assessment Task Māori – Tia

Again, Fig. 31 shows that completion of the SSS portion of the intervention brought about changes significantly above chance to Tia’s ability to segment te reo Māori words into syllables. Six months after the intervention concluded, Tia had continued to build on the skills she acquired during the intervention, scoring 9 out of 10 in this set of tasks. Tia’s whānau had a 75 per cent engagement rate in the

intervention, and this effort brought about considerable positive shifts in the cognitive skills Tia needs in order to experience success in early literacy.

### 5.3 Kahu

This section reveals the findings of Kahu’s IPI and SA tasks in both English and te reo Māori.

#### 5.3.1 Initial Phoneme Identification Results

The following graph (Fig. 32) shows the results of Kahu’s IPI assessment tasks in English pre-, mid-, and post-intervention.

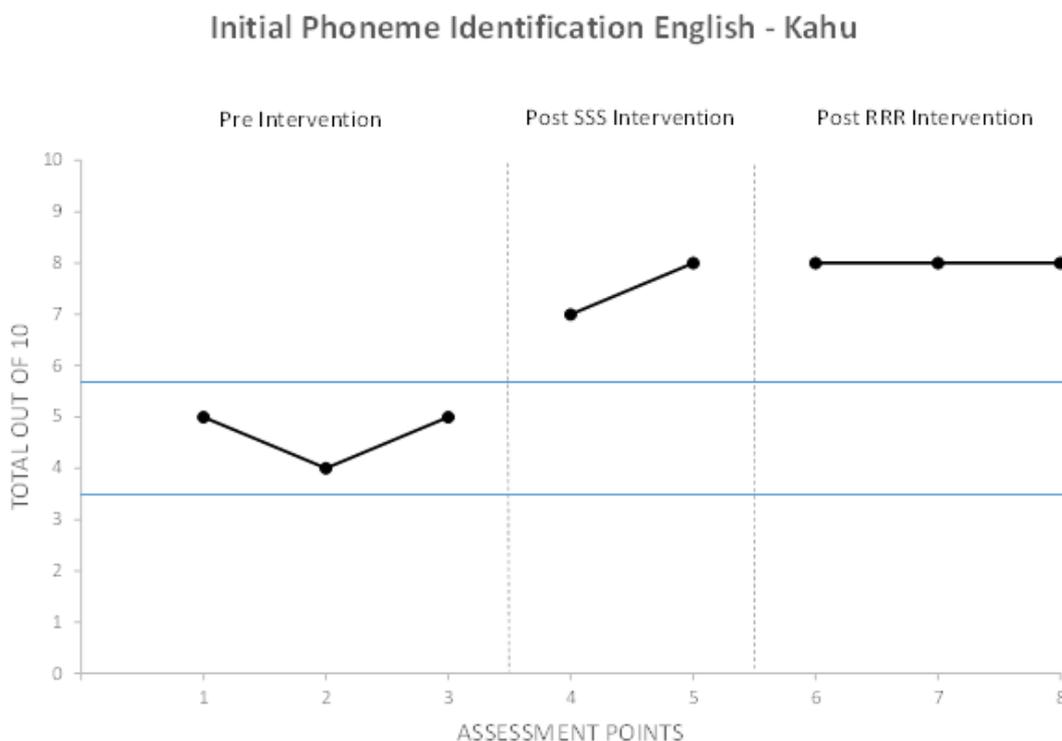


Figure 32. Initial Phoneme Identification English – Kahu

Kahu’s whānau completed the SSS portion of the intervention first, and the results presented in Fig. 32 show he made gains significantly above chance following the completion of the SSS shared book reading and activities. In Chapter Four, Table 3 showed that, pre-intervention, Kahu’s mother tended not to refer to sounds in

words during shared book reading, but that, after participating in the SSS portion of the intervention, her reading style changed, and she referred to sounds in words 11 times. This positive shift had a substantial effect on Kahu’s ability to identify the initial sounds in English words. He maintained this improvement post-intervention, and at the six-month follow up data collection round, he had improved further, scoring 10 out of 10 on this assessment task. The results of Kahu’s IPI assessment tasks in te reo Māori are illustrated by Fig. 33 below.

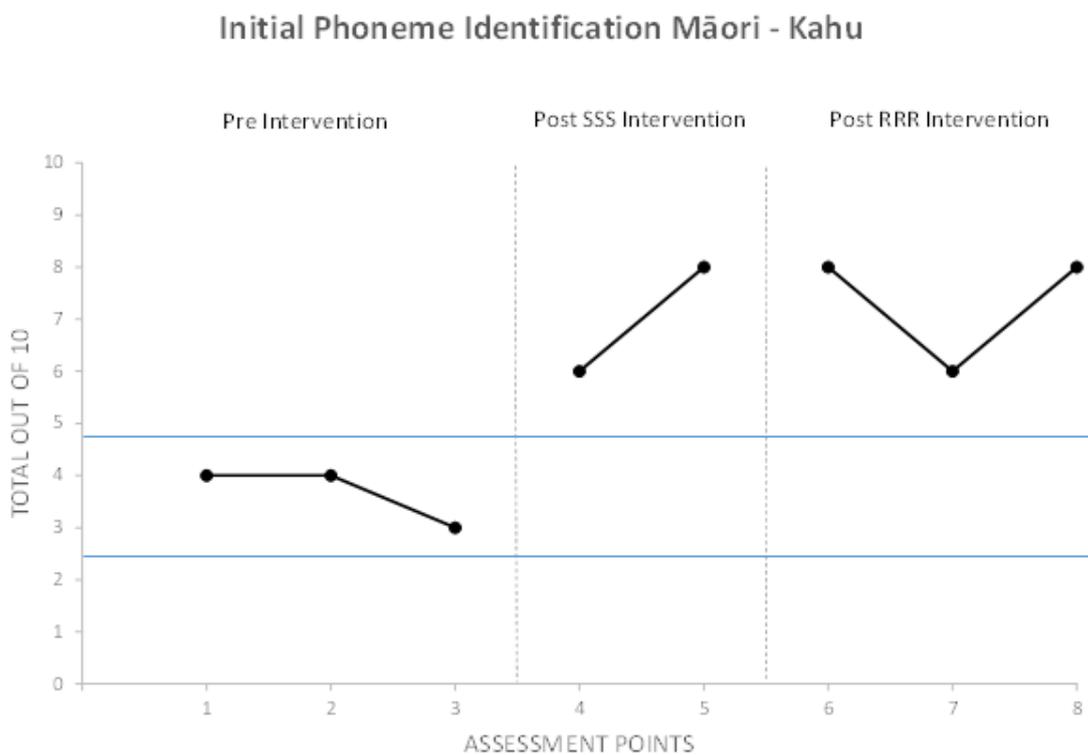


Figure 33. Initial Phoneme Identification Māori – Kahu

Like his test results for the IPI English assessment task, Kahu made a gain significantly above chance at the mid-intervention assessment point, and maintained this standard post-intervention. Kahu also scored 10 out of 10 on this assessment task six months after completing the intervention. Again, this trend supports contentions made by Cummins (1981), who argues that literacy skills in one language can support successful literacy development in another language. In addition to this, the results of both IPI assessment tasks are a testament to the effort his whānau made in engaging with the intervention, and are also evidence of the impact the intervention can have on the cognitive skills associated with early

literacy – in this case, Kahu’s ability to identify the initial phonemes in words. The second portion of this section presents the results of the SA assessment tasks Kahu completed in English and te reo Māori.

### 5.3.2 Syllable Assessment Task Results

The following graph (Fig. 34) shows the results of Kahu’s SA tasks in English pre-, mid-, and post-intervention.

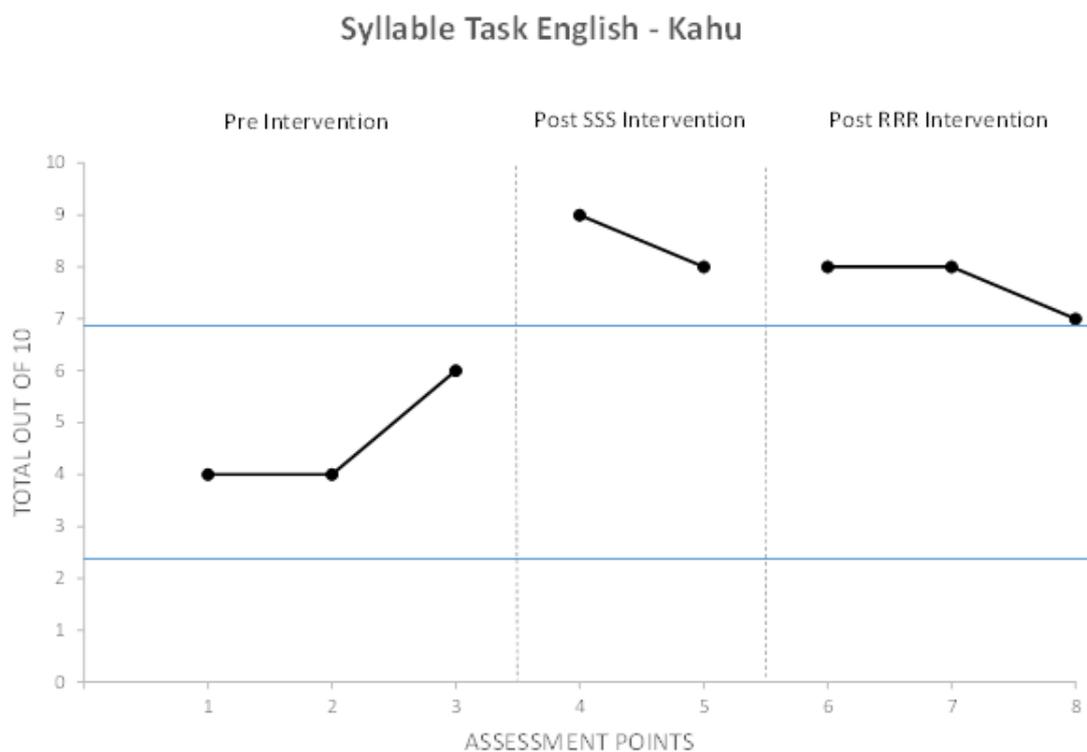


Figure 34. Syllable Assessment Task English – Kahu

Continuing with the trend illustrated in Figs. 32 and 33, this graph shows that, following the completion of the SSS portion of the intervention, Kahu made gains significantly above chance in his ability to detect syllables in English words. Again, he maintained this improvement post-intervention, as well as six months after the intervention finished, scoring 10 out of 10 on this assessment task. Fig. 35 shows the results for Kahu’s SA task using te reo Māori words.

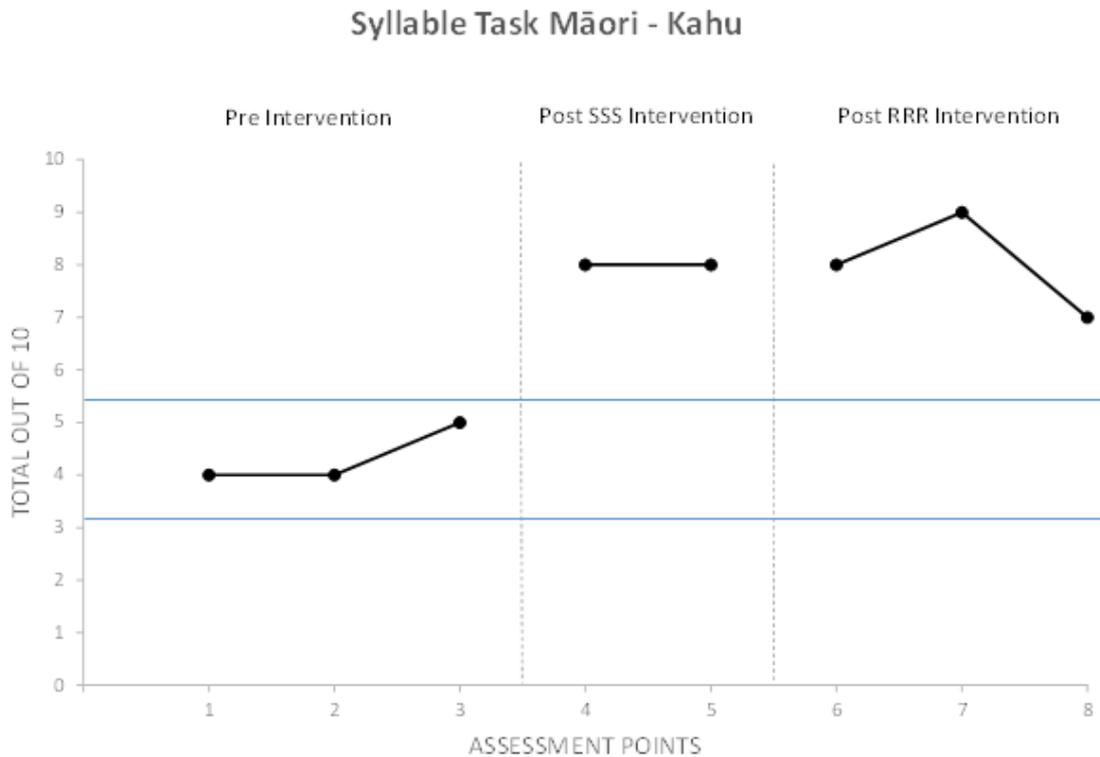


Figure 35. Syllable Assessment Task Māori – Kahu

Finally, Fig. 35 provides further evidence of the gains Kahu made as a result of the effort his whānau made during the intervention – in this case, revealing the improvements, which were significantly above chance, that Kahu made in his ability to identify the syllables in te reo Māori words. He maintained this improvement at the six-month follow up data collection point, scoring 9 out of 10 in this assessment task. In summary, Fig. 35, as well as Figs. 32, 33, and 34, indicate that the activities associated with the SSS portion of the intervention are able to have a major impact on the cognitive skills children need to support them in early literacy success.

#### 5.4 Moana

This section depicts the findings of Moana’s IPI and SA tasks in English and te reo Māori.

### 5.4.1 Initial Phoneme Identification Results

The following graph (Fig. 36) shows the results of Moana’s IPI tasks in English pre-, mid-, and post-intervention.

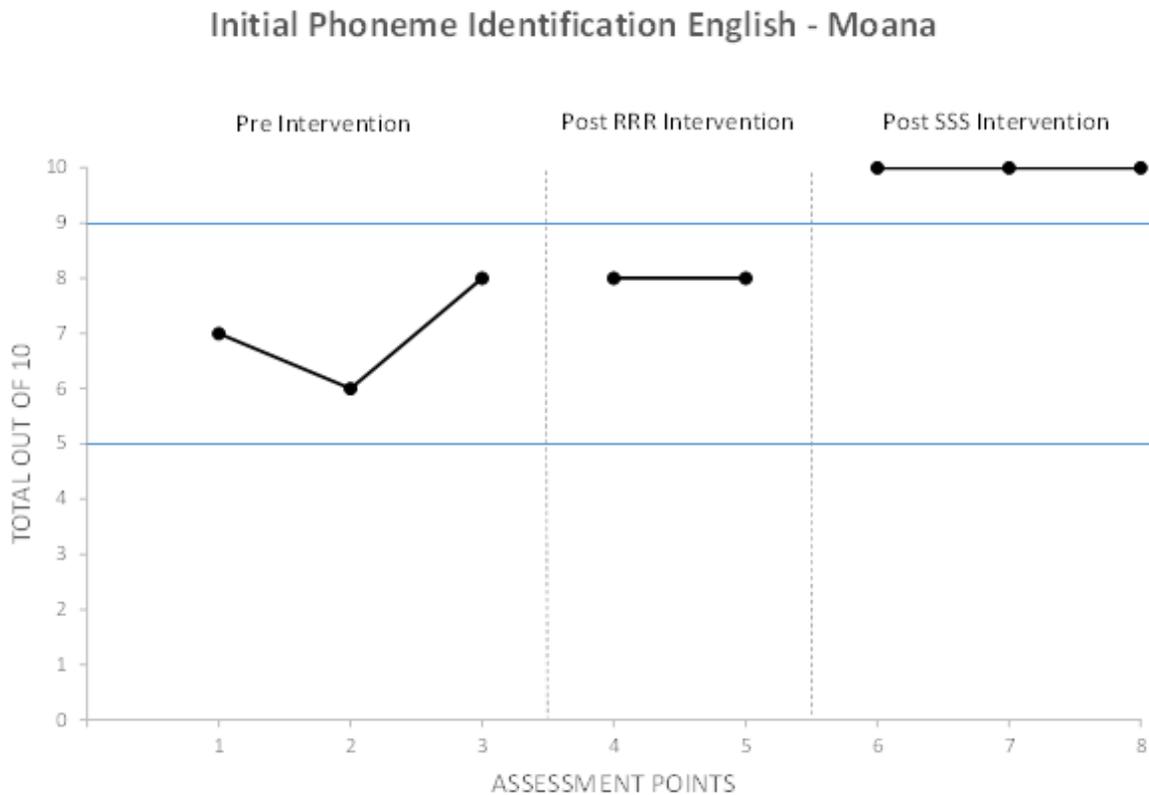


Figure 36. Initial Phoneme Identification English – Moana

In Chapter Four, the data sets relating to Moana’s home literacy environment revealed that, pre-intervention, Moana had a high interest in reading, and that her whānau engaged in shared book reading, and other literacy practices, ‘7 or more times per week’ and ‘often’, respectively. Her IPI pre-intervention assessment task results show that Moana has reasonably solid skills when it comes to identifying the initial phoneme in English words. Moana’s whānau completed the RRR portion of the intervention first, and the mid-intervention data collection results show that Moana did not make any significant improvements at this point. However, the crossover design of the study provides rigorous evidence of the effectiveness of the intervention. Following the completion of the SSS part of the intervention, Moana made gains significantly above chance, and to a level where she was able to

maintain consistency. Six months after completing the intervention, she scored 10 out of 10 on this assessment task. These positive shifts add further weight to the efficacy of the activities associated with the SSS portion of the intervention in generating changes to the phonological awareness skills of the children participating in this study. Fig. 37 shows the results of Moana’s IPI assessment task in te reo Māori.

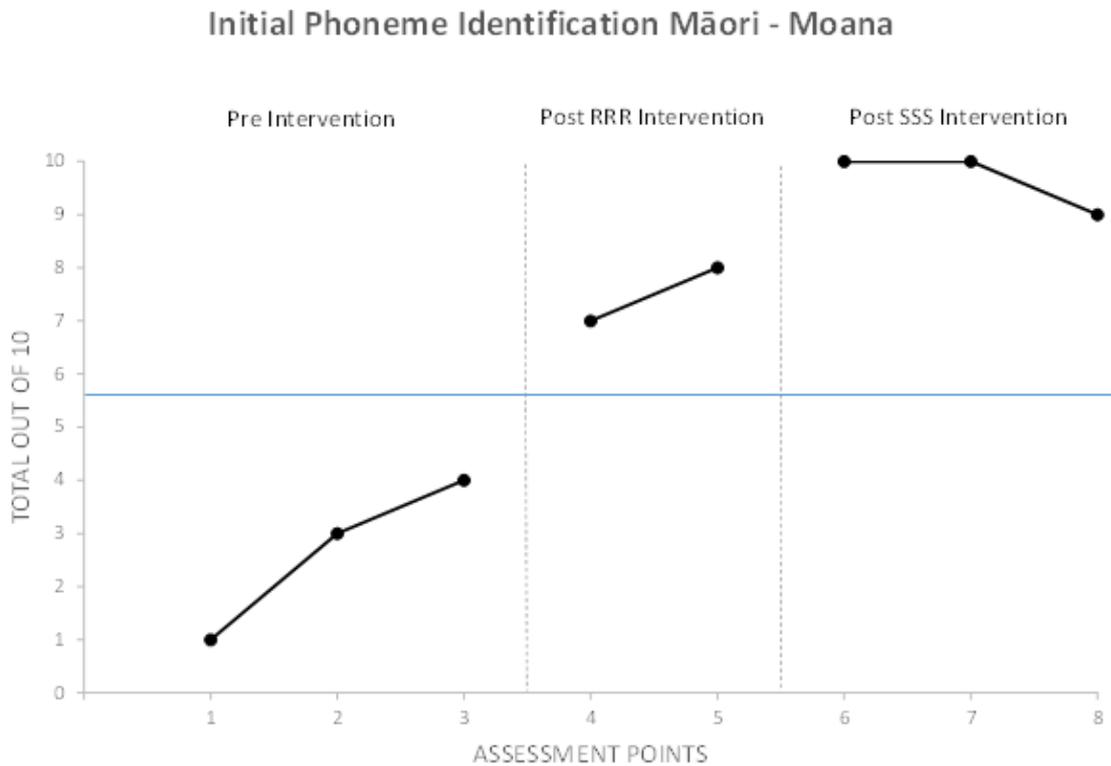


Figure 37. Initial Phoneme Identification Māori – Moana<sup>29</sup>

Prior to participating in this research, Moana heard comparatively little te reo Māori in her home. However, her whānau made a commitment to complete as many activities, and to read as many books, in te reo Māori as possible. This had an impact on Moana’s ability to identify the initial phoneme in te reo Māori words, a skill which was already reasonably well-developed in English. However, like Cummins suggests, literacy support in one language (in this instance, English) can foster successful literacy development in another language (that is, te reo Māori). After being exposed to a greater level of te reo Māori, Moana was able to apply the

<sup>29</sup> Pre-intervention, Moana scored an average of 2.67 with a two standard deviation of 3.06, hence why only one line appears on the graph depicting the two standard deviation band.

skills she had developed in English. Fig. 37 shows Moana made significant gains in this assessment task, scoring significantly above chance after completing the RRR portion of the intervention, and improving post-intervention following engaging with the SSS part of the intervention, on the gains made mid-intervention. Moana maintained this improvement six months after the intervention finished, scoring 10 out of 10 on this assessment task. The following part of this section presents the results of the SA assessment tasks Moana completed in English and te reo Māori.

#### 5.4.2 Syllable Assessment Task Results

Fig. 38 illustrates the results of the SA tasks conducted with Moana in English.

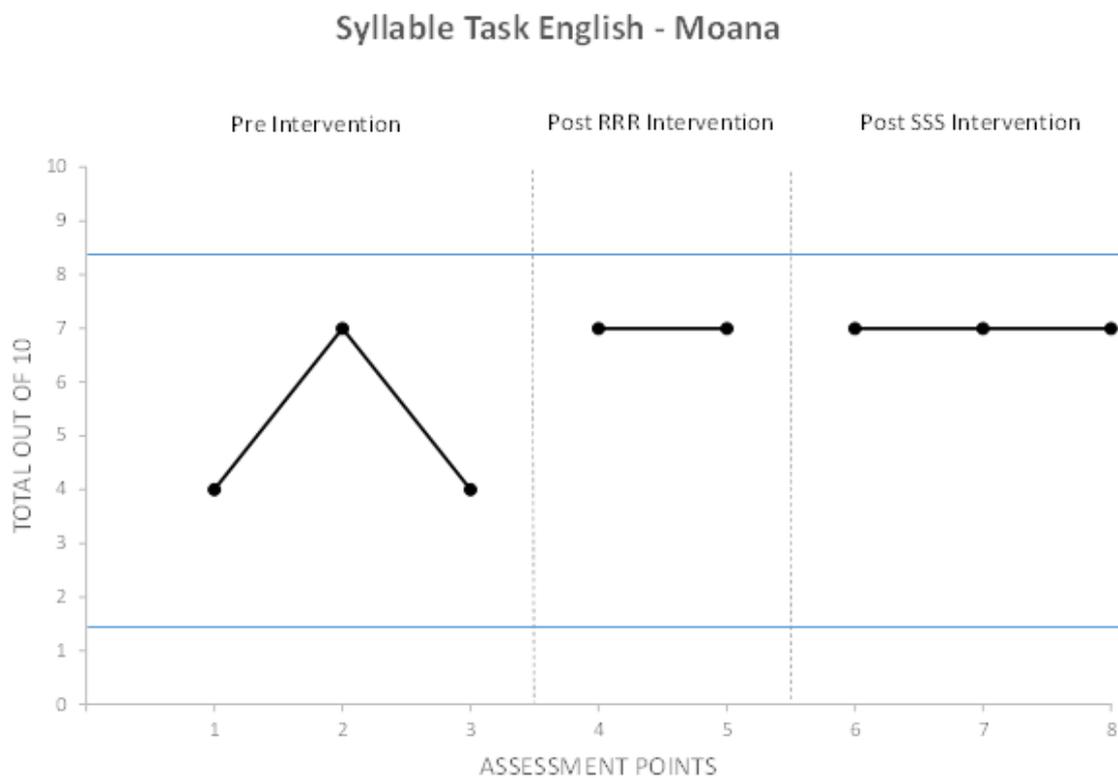


Figure 38. Syllable Assessment Task English – Moana

Unlike the improvements above chance that Moana made in the IPI assessment tasks in English and te reo Māori, Moana did not make any significant gains in her ability to identify syllables in English words. However, her capability in performing

this task was reasonably well-developed, and she did improve to a level of consistency post-intervention. Moana consistently scored 7 out of 10 on this task, unable in each instance to separate one-syllable words correctly (where three one-syllable words appeared in this test), tending instead to segment these words into two syllables. However, six months after the intervention finished, Moana was able to identify the correct number of syllables in one-syllable words, and scored 10 out of 10 on this assessment task. Fig. 39 illustrates the results of Moana’s SA task in te reo Māori.

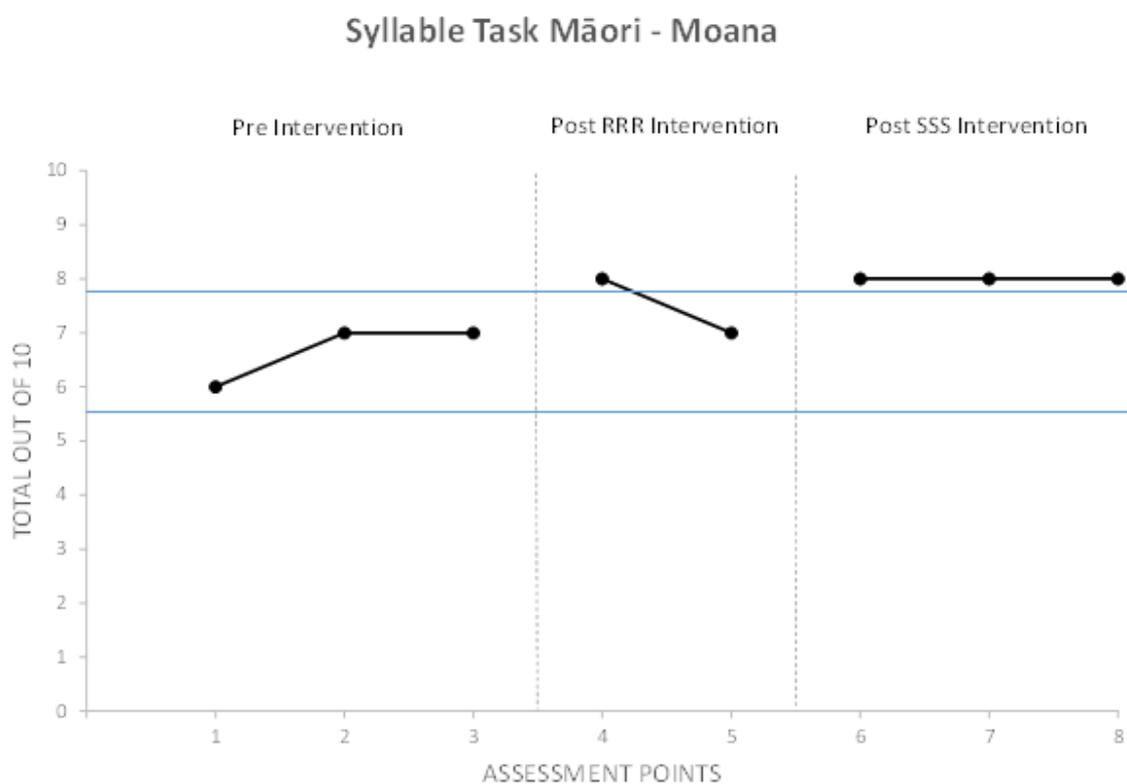


Figure 39. Syllable Assessment Task Māori – Moana

Similarly, this graph shows that Moana had a reasonably solid understanding of identifying syllables in te reo Māori words, although in these series of assessments, she did improve above chance following the completion of the SSS portion of the intervention. Again, she struggled to separate one-syllable words, scoring a consistent 8 out of 10 (where one-syllable words appeared twice in this assessment). However, Moana continued to consolidate her skills after the

intervention ceased, and improve on her ability to separate one-syllable words, scoring 10 out of 10 on this assessment task at the six-month follow up data collection phase.

## 5.5 Ana

This section reveals the findings of Ana’s IPI and SA tasks in both English and te reo Māori.

### 5.5.1 Initial Phoneme Identification Results

Fig. 40 represents the findings of IPI assessment task Ana completed using English words.

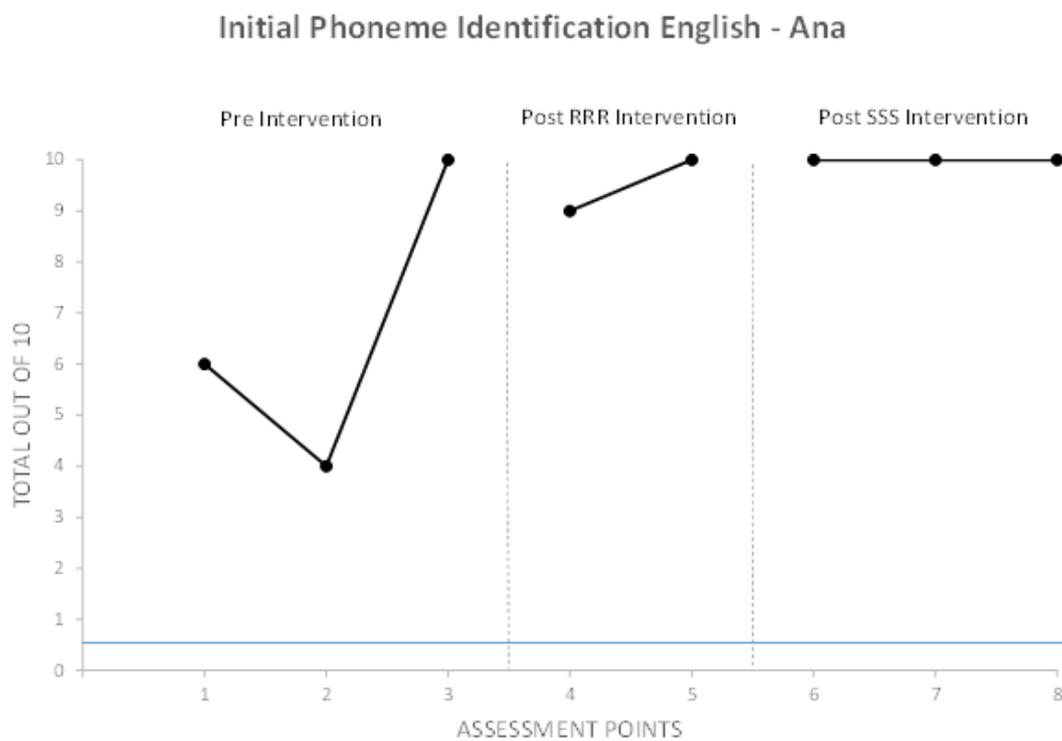


Figure 40. Initial Phoneme Identification English – Ana<sup>30</sup>

<sup>30</sup> Pre-intervention, Ana scored an average of 6.67 with a two standard deviation of 6.11, hence why only one line appears on the graph depicting the two standard deviation band.

This graph (Fig. 40) shows that despite completing the RRR portion of the intervention first, Ana made gains above chance in her ability to detect the initial sound in English words at the mid-intervention data collection point. She continued to improve post-intervention, and maintained this standard six months after the intervention ceased, scoring 10 out of 10 on this assessment task. Ana’s whānau had comparatively low levels of engagement in the intervention, but, when conducting the various rounds of assessment with Ana, the researcher observed that Ana very quickly determined what was being asked of her, and was able to respond with the correct answer in most instances. The following graph (Fig. 41) reveals the results of the IPI task Ana completed in te reo Māori.

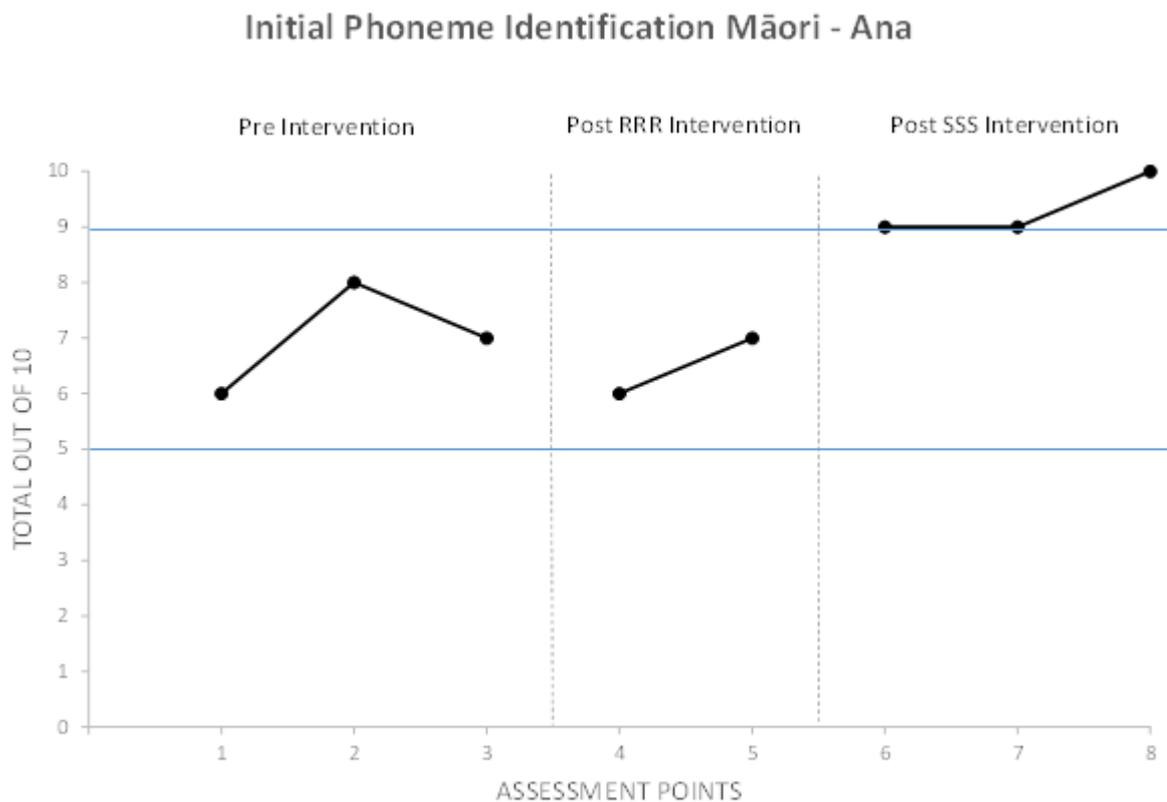


Figure 41. Initial Phoneme Identification Māori – Ana

Fig. 41 illustrates a trend evident in the results of the other children participating in this study, where, following completion of the RRR portion of the intervention, Ana did not make significant improvements in her ability to identify the initial sound in te reo Māori words. However, after engaging with the shared book reading and activities associated with the SSS part of the intervention, she improved to a

level significantly above chance. She maintained this improvement six months after completing the intervention, scoring 10 out of 10 on this assessment task. The following part of this section presents the findings of the SA tasks completed with Ana in English and te reo Māori.

### 5.5.2 Syllable Assessment Task Results

Fig. 42 represents the findings of the SA task Ana completed using English words.

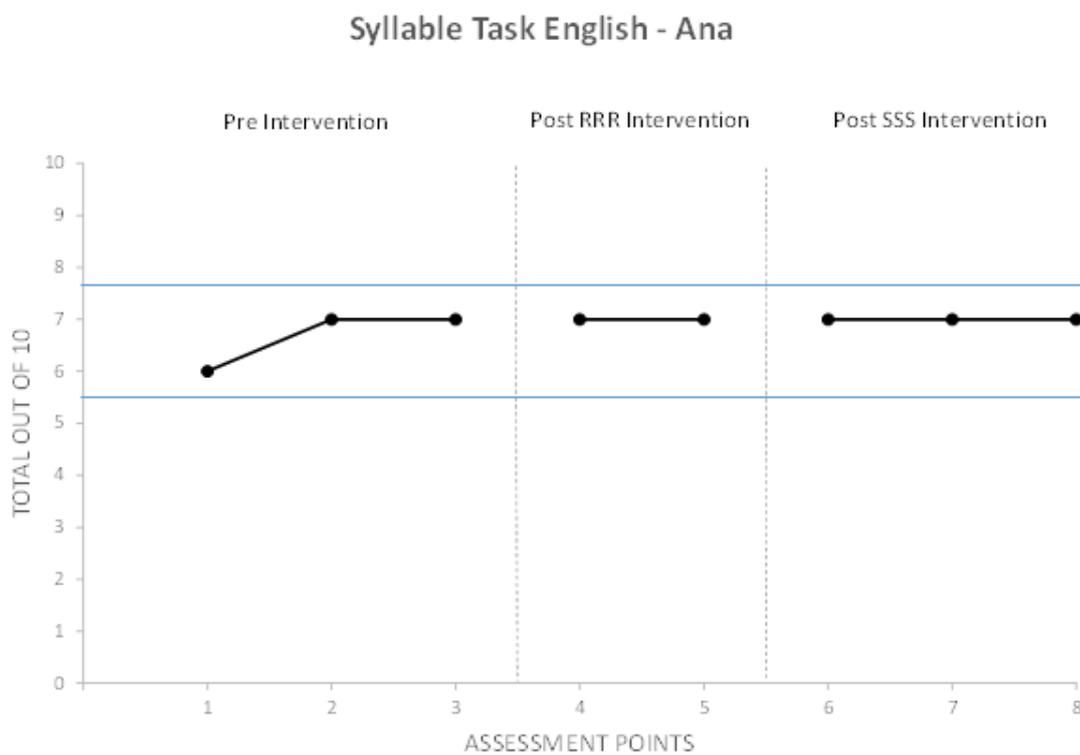


Figure 42. Syllable Assessment Task English – Ana

Pre-intervention, Ana had a relatively well-developed ability to separate English words into syllables. However, this skill did not improve during the intervention, which may be a result of the engagement level of her whānau. Like Moana, Ana consistently scored 7 out of 10 on this task, unable in each instance to separate one-syllable words correctly. Instead, Ana would segment these words into two syllables. However, six months after the intervention finished, Ana was able to hear the correct number of syllables in one-syllable words, and scored 10 out of 10 on

this assessment task. This suggests that this skill is perhaps one that continues to be refined as the child gets older. Fig. 43 shows the results of the SA task Ana completed in te reo Māori.

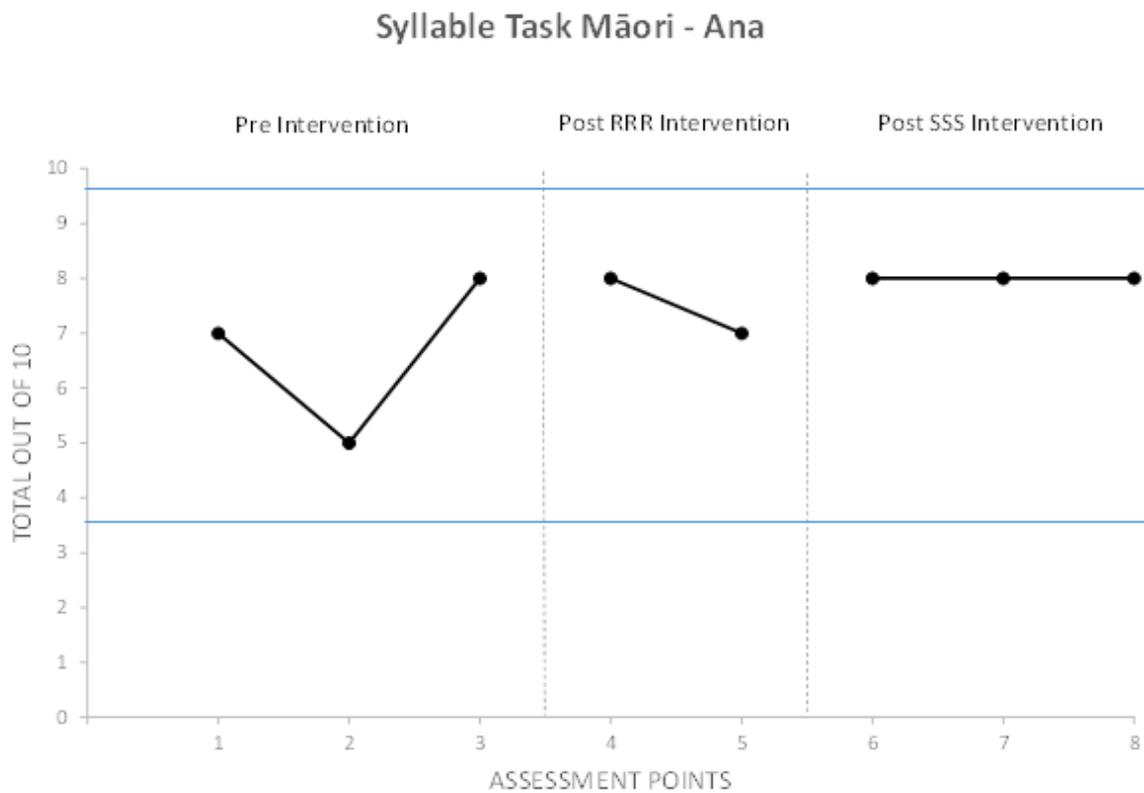


Figure 43. Syllable Assessment Task Māori – Ana

Like the results depicted in Fig. 42, this graph shows that Ana did not improve significantly above chance, although she was able to acquire consistency in her responses. Again, Ana would segment one-syllable words as if they had two syllables, and this persisted at the six-month follow up assessment point, where she scored 8 out of 10 on this assessment task.

## 5.6 Tama

This section depicts the findings of Tama’s IPI and SA tasks in English and te reo Māori.

### 5.6.1 Initial Phoneme Identification Results

The following graph (Fig. 44) illustrates the findings of the IPI English assessment task completed with Tama.

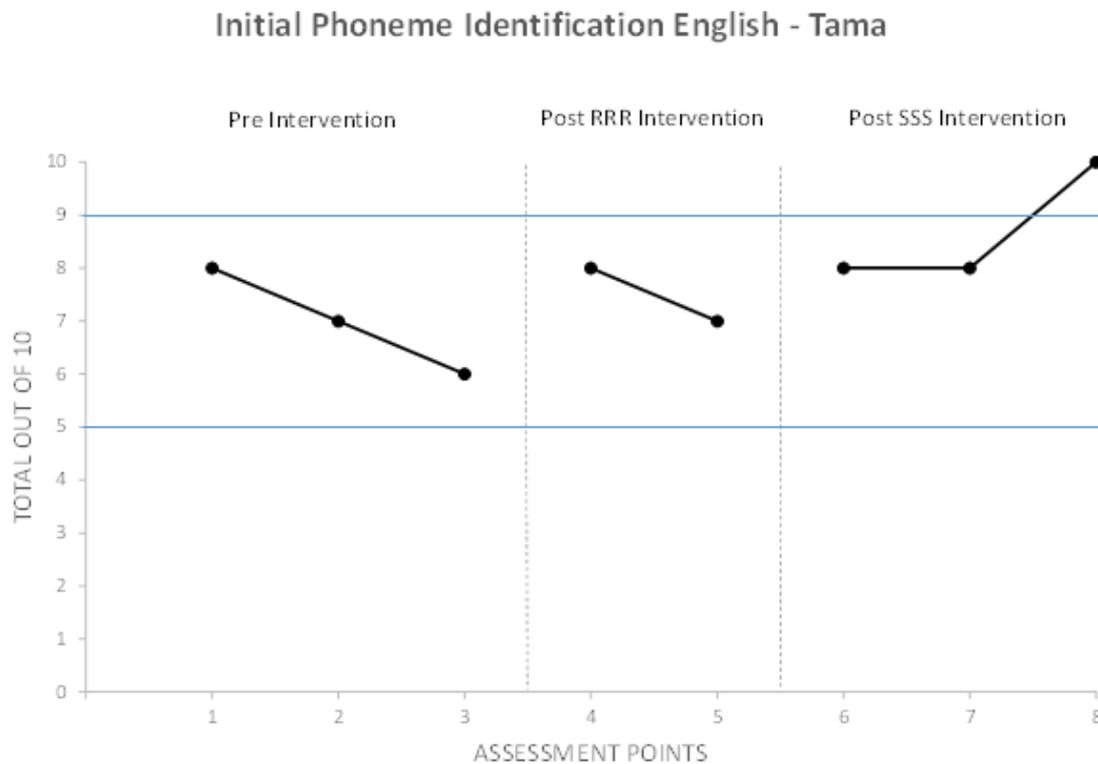
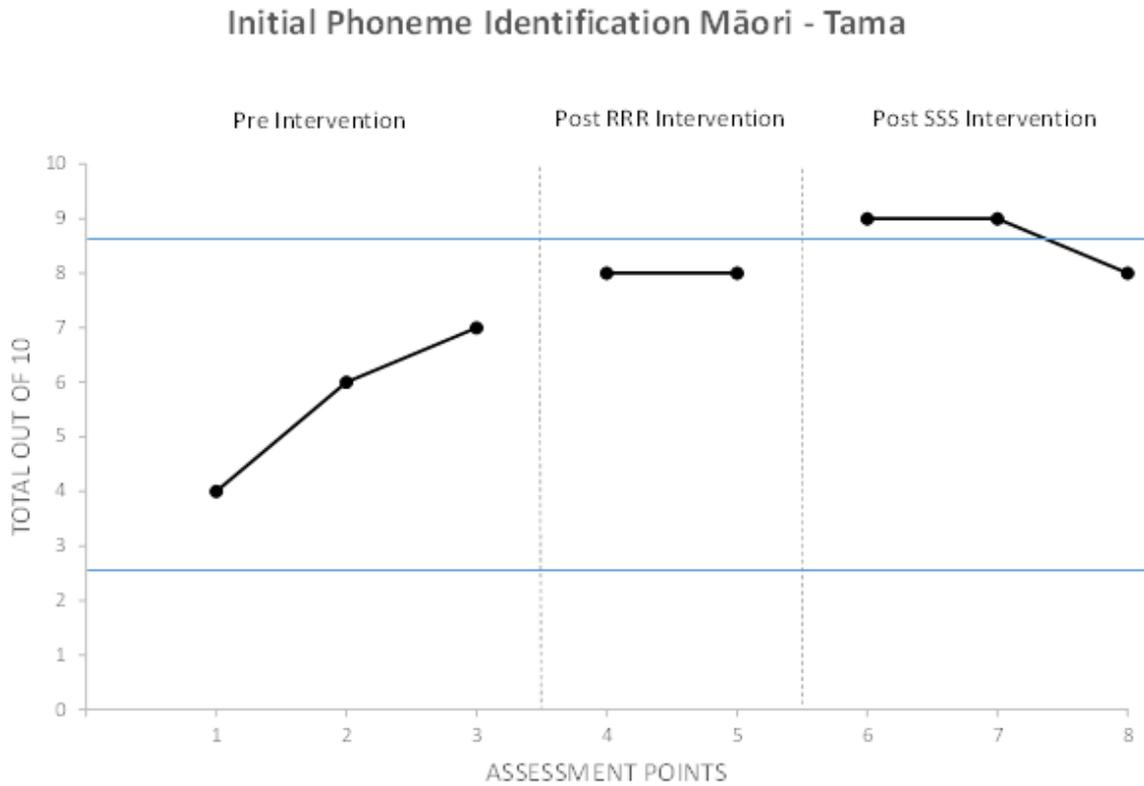


Figure 44. Initial Phoneme Identification English – Tama

Tama’s whānau completed the RRR portion of the intervention first, and this is evident in the results shown in Fig. 44. It was not until after his whānau engaged with the SSS part of the intervention that Tama made any gains significantly above chance. He continued to strengthen his skills in detecting the initial phoneme in English words, and six months after the intervention ceased, scored 10 out of 10 on this assessment task. Fig. 45 shows Tama’s abilities at identifying the first sound in te reo Māori words.

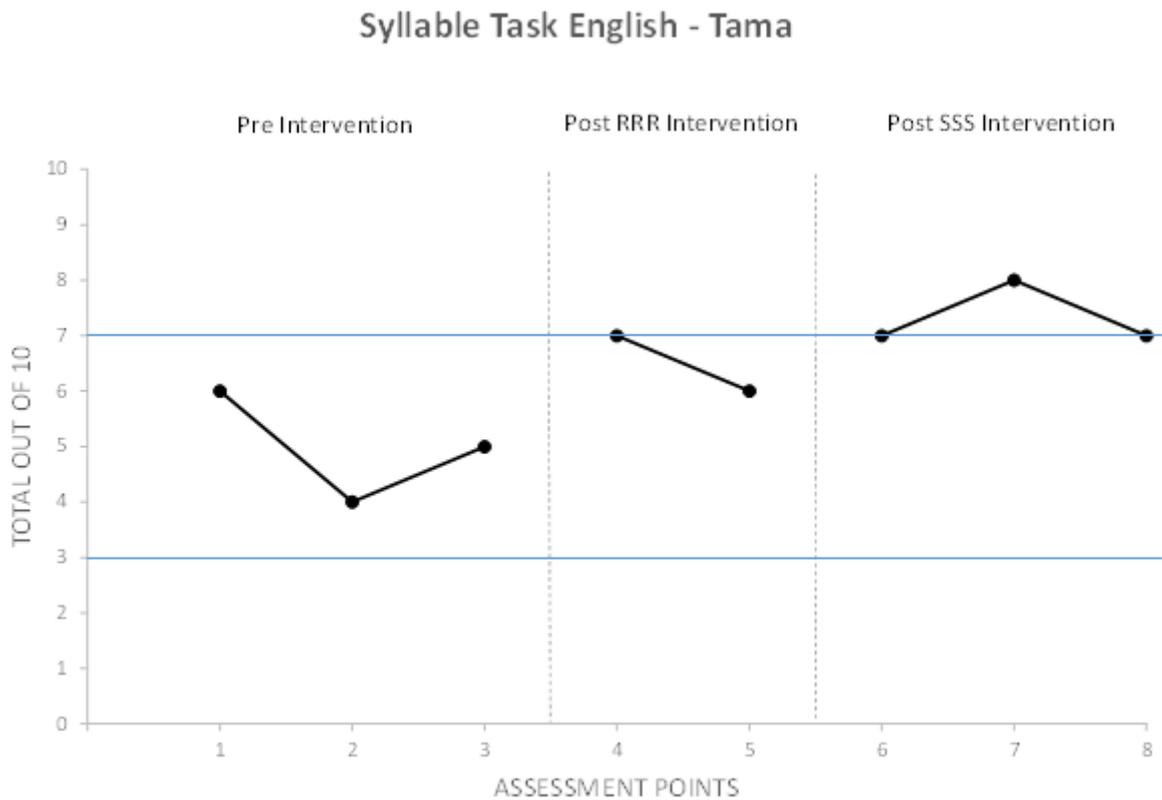


*Figure 45. Initial Phoneme Identification Māori – Tama*

Similar to the trend illustrated in Fig. 44, this graph reveals Tama improved significantly above chance following the completion of the SSS portion of the intervention. Again, he continued to consolidate this skill after the intervention finished, and scored 10 out of 10 on this assessment task at the six-month follow up data collection point. The following part of this section presents the findings of the SA tasks completed with Tama in English and te reo Māori.

#### 5.6.2 Syllable Assessment Task Results

The following graph (Fig. 46) illustrates the findings of the SA task completed in English with Tama.



*Figure 46. Syllable Assessment Task English – Tama*

This graph shows that Tama made steady gains during the intervention, which reached the level of significantly above chance following the completion of the SSS portion of the intervention. He continued to improve after the intervention ceased, and scored 10 out of 10 on this assessment task at the six-month follow up data collection point. The following graph (Fig. 47) shows the results of the SA task Tama completed in te reo Māori.

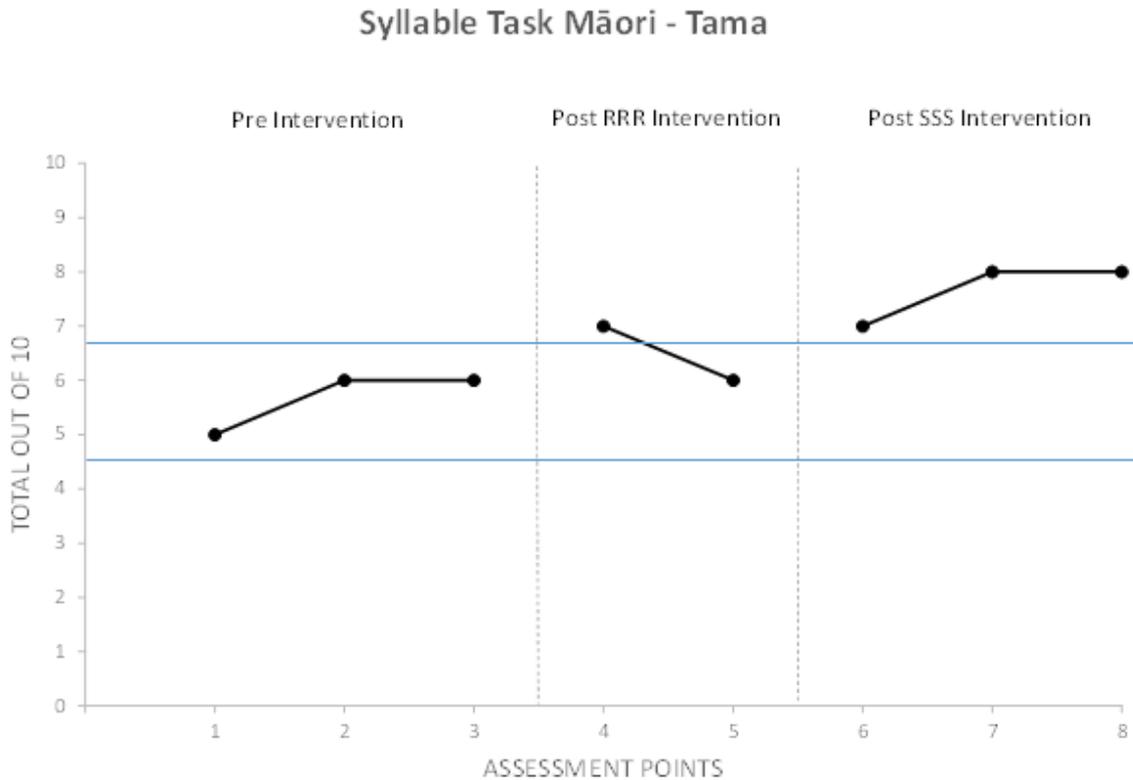


Figure 47. Syllable Assessment Task Māori – Tama

Like Fig. 46, this graph illustrates the consistent improvements Tama made in his ability to separate te reo Māori words into syllables, which reached a level of significantly above chance post-intervention. This trend is similar to those evident in the results of other children participating in this research, and lends weight to the efficacy of the SSS shared book reading and activities in creating positive shifts in the cognitive abilities children need to perform well in in order to increase their likelihood of experiencing early literacy success. Six months after the intervention ceased, Tama scored 9 out of 10 on this assessment task.

### 5.7 Hine

This section depicts the findings of Hine’s IPI and SA tasks in English and te reo Māori.

### 5.7.1 Initial Phoneme Identification Results

The following graph (Fig. 48) shows the results of Hine’s IPI assessment tasks pre-, mid-, and post-intervention using English words.

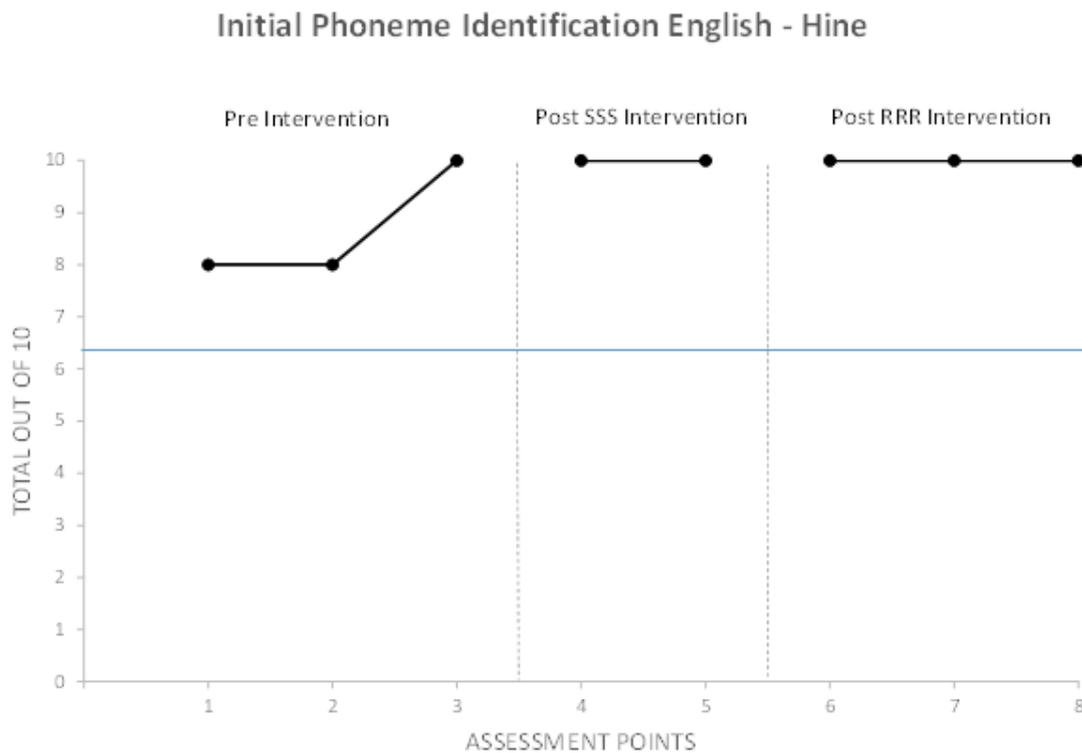


Figure 48. Initial Phoneme Identification English – Hine<sup>31</sup>

Pre-intervention, Hine’s mother reported Hine had a high level of interest in reading. Hine presented with a reasonably well-developed ability to detect the initial sound in English words pre-intervention. Her whānau completed the SSS portion of the intervention first, and after engaging in the activities associated with this, Hine scored 10 out of 10 on this assessment task, a result she maintained post-intervention, and at the six-month follow up data collection point. Fig. 49 shows Hine’s results in the IPI assessment task using te reo Māori words.

<sup>31</sup> Pre-intervention, Hine scored an average of 8.67 with a two standard deviation of 2.31, hence why only one line appears on the graph depicting the two standard deviation band.

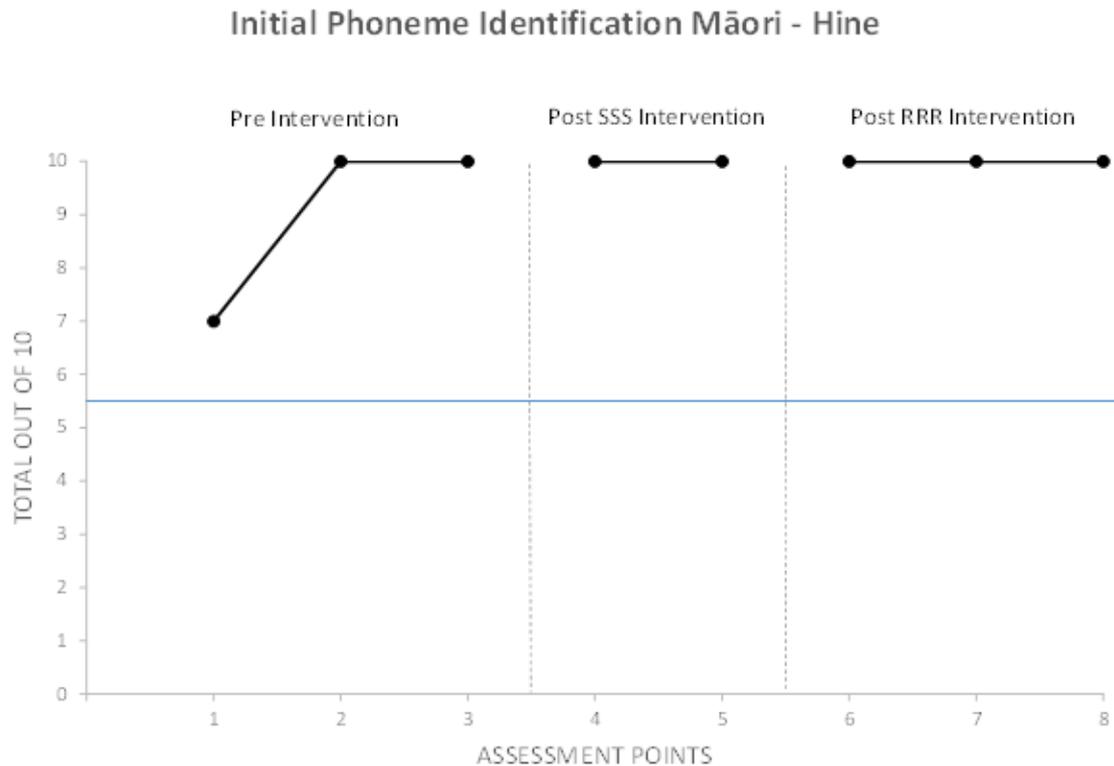


Figure 49. Initial Phoneme Identification English – Hine<sup>32</sup>

Following an almost identical trend to her IPI English assessment task, Hine made a rapid gain in her ability to detect the first sound in te reo Māori words. She maintained this skill throughout the intervention, and at the six-month post-intervention follow up, scoring 10 out of 10 in this assessment task. Royer and Carlo (1991) contend that children’s literacy skills in one language can be highly correlated with their performance in another language, and the results illustrated in Figs. 48 and 49 support this assertion. The next section presents data on Hine’s phonological awareness assessments, which she completed in both English and te reo Māori.

<sup>32</sup> Pre-intervention, Hine scored an average of 9 with a two standard deviation of 3.46, hence why only one line appears on the graph depicting the two standard deviation band.

### 5.7.2 Syllable Assessment Task Results

Fig. 50 represents the findings of the SA task Hine completed using English words.

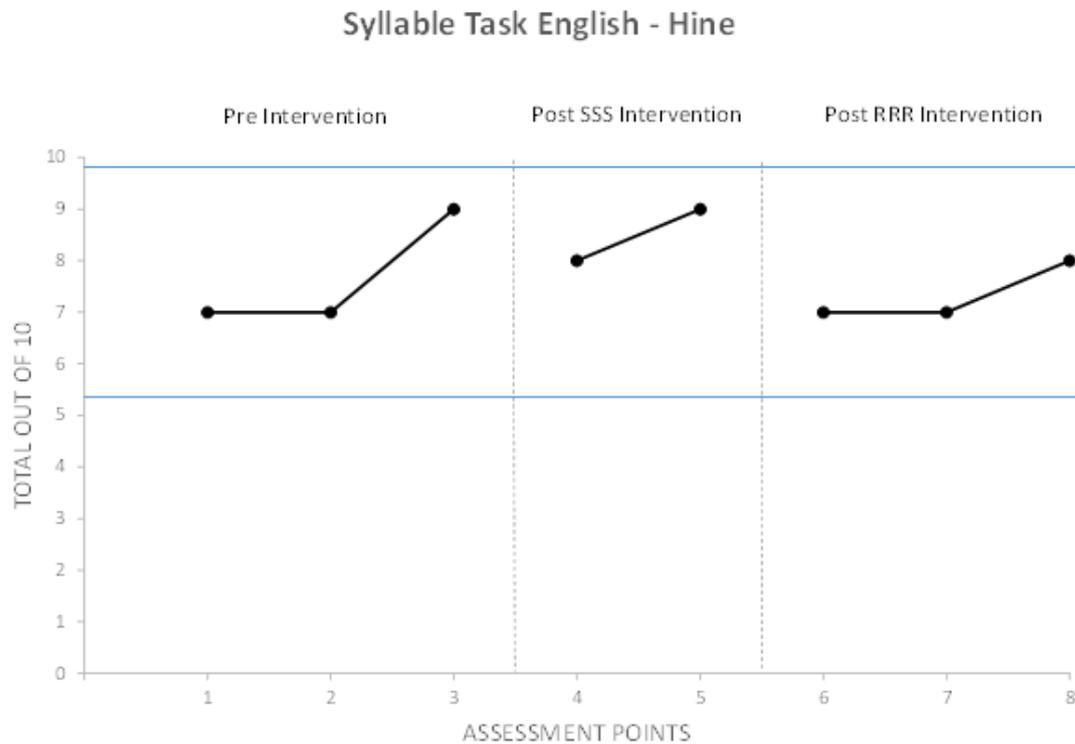


Figure 50. Syllable Assessment Task English – Hine

Pre-intervention, Hine already had strong skills in her ability to separate English words into syllables. She maintained this level throughout the duration of the intervention, and did not make any significant gains above chance. Like other children participating in this study, she tended to struggle with segmenting one-syllable words. However, six months after the intervention ceased, like other children, she scored 10 out of 10 in this assessment task. The subsequent graph (Fig. 51) illustrates Hine's results from the SA task, which used te reo Māori words.

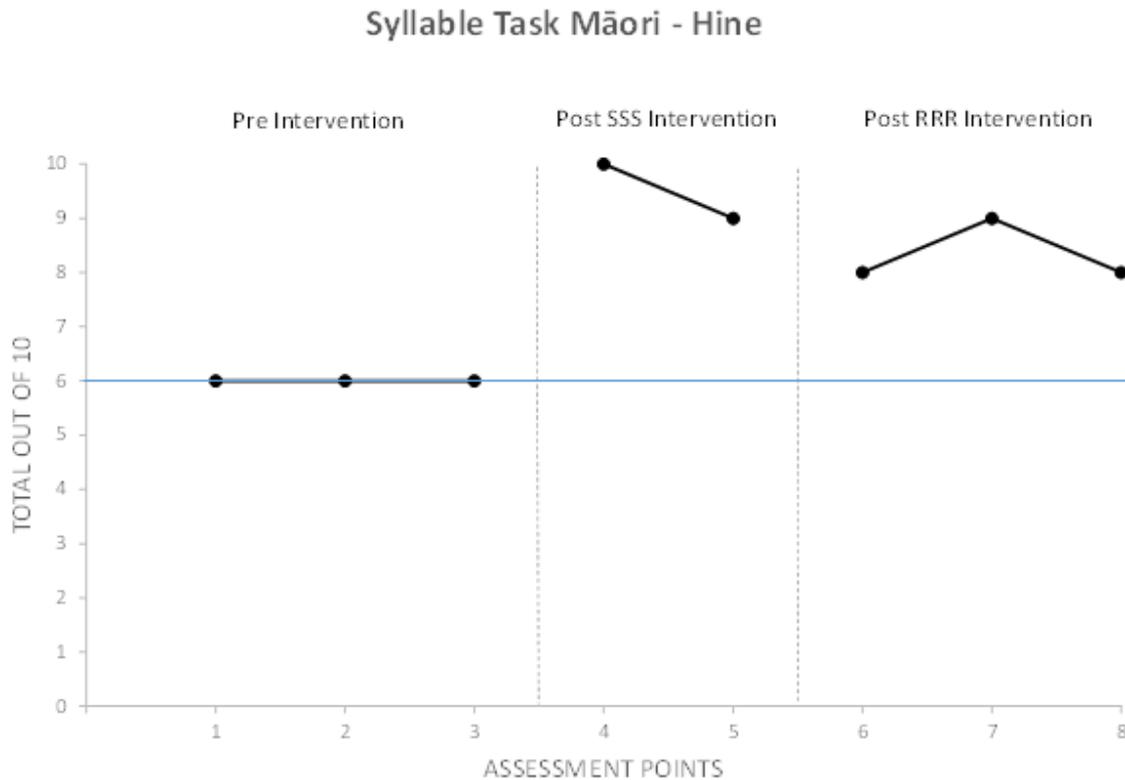


Figure 51. Syllable Assessment Task Māori – Hine<sup>33</sup>

Unlike the results depicted in Fig. 50, this graph shows Hine made improvements significantly above chance in her ability to separate syllables in te reo Māori words following her whānau’s completion of the SSS portion of the intervention. This trend continued post-intervention, and six months after the intervention ceased, Hine made further gains, scoring 10 out of 10 on this assessment task.

## 5.8 Aroha

The final section in this chapter presents data on Aroha’s phonological awareness assessments, which she completed in both English and te reo Māori.

<sup>33</sup> Pre-intervention, Hine scored an average of 6 with a two standard deviation of 0, hence why only one line appears on the graph depicting the two standard deviation band.

### 5.8.1 Initial Phoneme Assessment Results

The graph below (Fig. 52) shows the results of Aroha’s IPI assessment tasks in English pre-, mid-, and post-intervention.

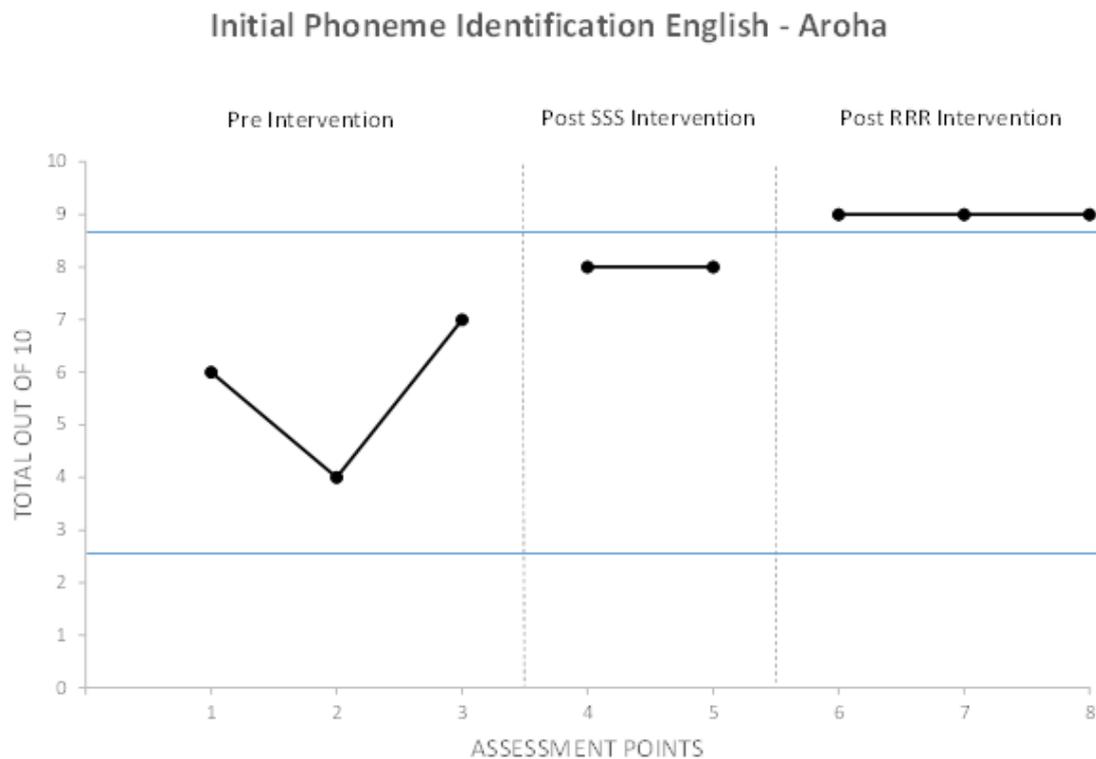
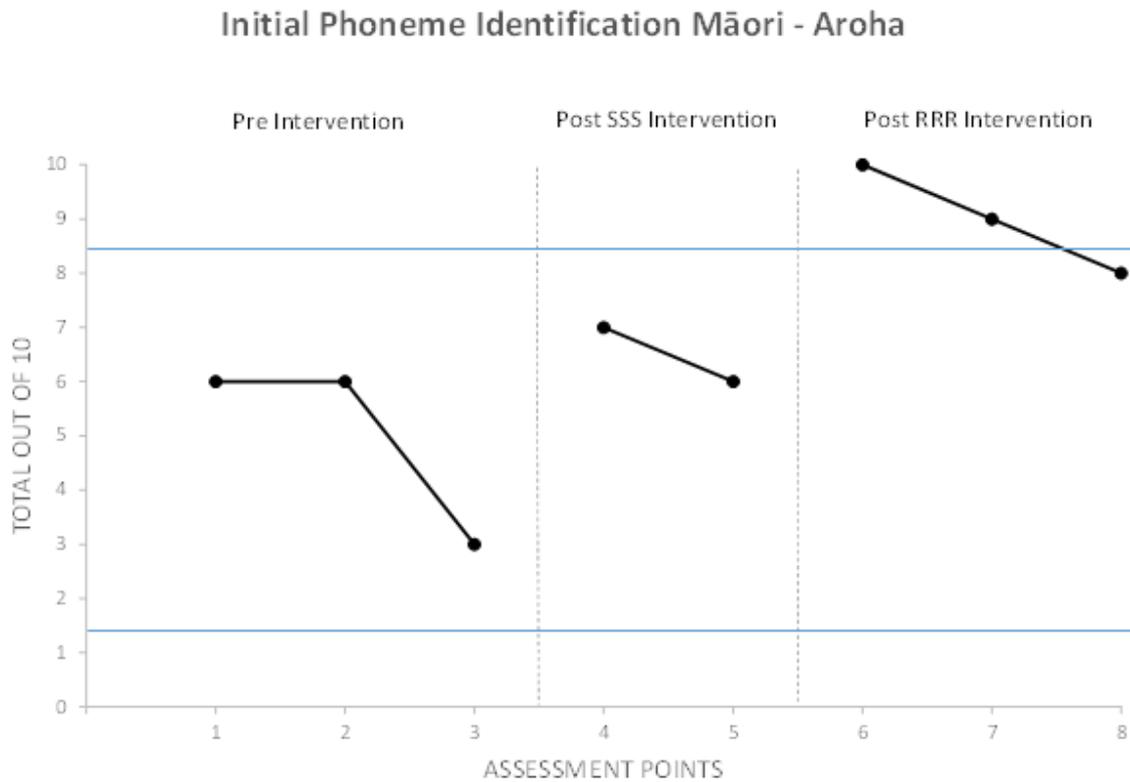


Figure 52. Initial Phoneme Identification English – Aroha

Aroha’s whānau completed the SSS portion of the intervention first, and although she made some improvements in her ability to detect the initial phoneme in English words, these were significantly above chance. However, interestingly, post-intervention, Aroha continued to strengthen her skills in this area, to the point of a level significantly above chance. Six months after the intervention ceased, Aroha scored 10 out of 10 in this assessment task. Fig. 53 illustrates the results of Aroha’s IPI assessment using te reo Māori words.



*Figure 53. Initial Phoneme Identification Māori – Aroha*

Fig. 53 depicts a similar trend in results as those shown in Fig. 52. Despite completing the SSS portion of the intervention first, Aroha did not show gains significantly above chance until post-intervention. However, she continued to strengthen her skills in this area, scoring 10 out of 10 on this assessment task at the six-month post-intervention follow up data collection point. The final part of this section presents data on Aroha’s SA tasks, which she completed in both English and te reo Māori.

### 5.8.2 Syllable Assessment Task Results

Fig. 54 represents the findings of SA task Hine completed using English words.

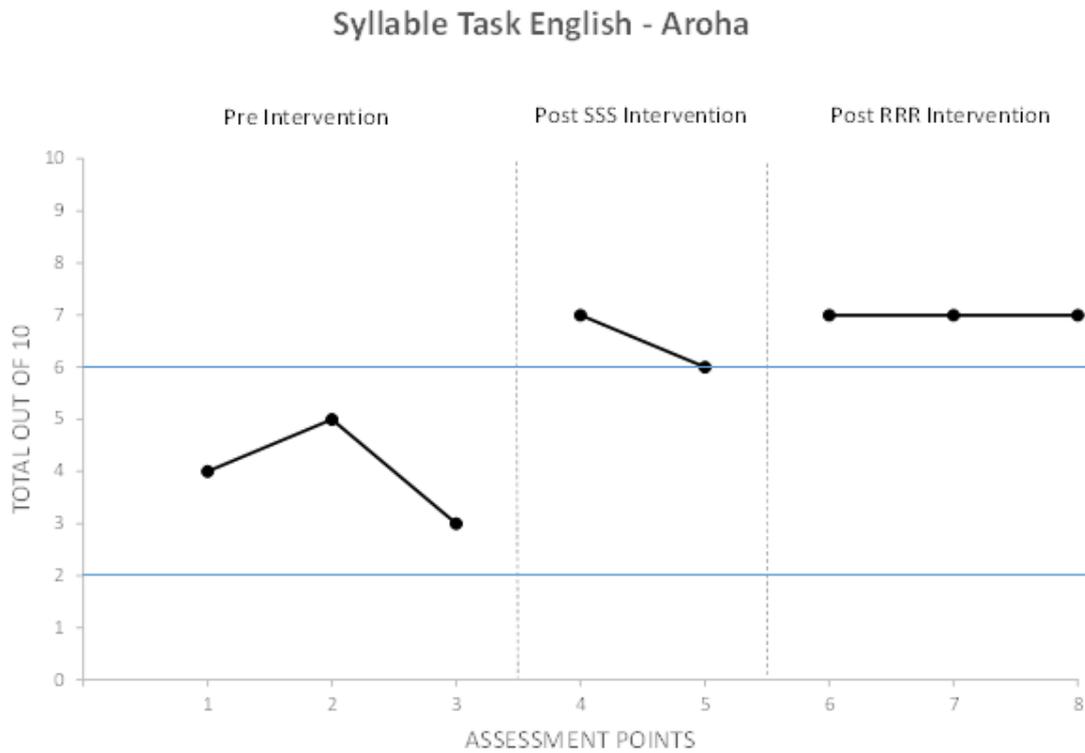


Figure 54. Syllable Assessment Task English – Aroha

Fig. 54 shows that Aroha made gains significantly above chance in her ability to separate English words into syllables following her engagement with the SSS portion of the intervention. This trend continued post-intervention, although like other children participating in this research, she struggled to segment one-syllable words, and tended to separate them into two syllables. However, six months after her whānau completed the intervention, Aroha was able to separate one-syllable words correctly, suggesting this is a skill that comes with age. The final graph in this chapter (Fig. 55) illustrates Aroha’s results from the SA task that used te reo Māori words.

## Syllable Task Māori - Aroha

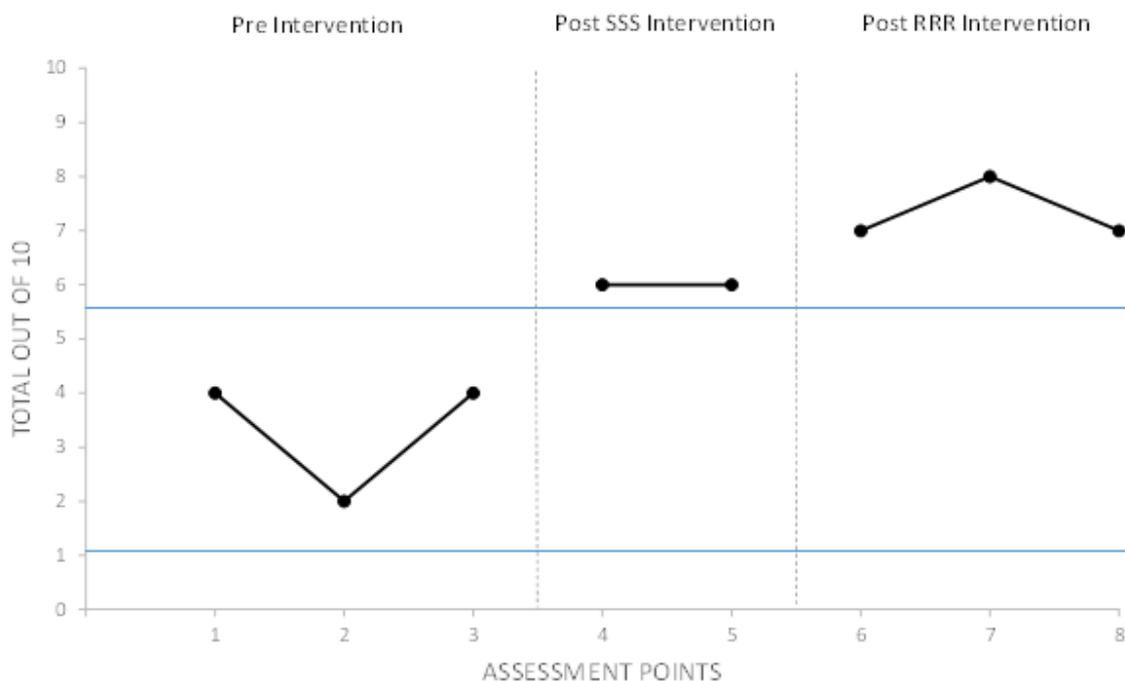


Figure 55. Syllable Assessment Task Māori – Aroha

Following an almost identical trend to that depicted in Fig. 54, this graph reveals that, following completion of the SSS portion of the intervention, Aroha's ability to separate te reo Māori words into syllables improved significantly above chance, and she continued to build on this skill post-intervention. Six months after the intervention ceased, Aroha scored 9 out of 10 on this assessment task.

### 5.9 Summary

The purpose of this chapter was to present the data sets generated by the phonological awareness assessment tasks completed with each child pre-, mid, and post-intervention, as well as six months after the intervention ceased. It was mentioned in Chapter Four that in order to align with a general Māori worldview, as well as the single case design used in this study, and aspects of the theoretical frameworks underpinning this research, the data related to each child and their whānau was presented in a section of its own. In the interests of cohesion, this chapter followed that structure.

Each section was divided into two parts. The first part of each section presented the findings of the IPI English and IPI Māori tasks, which were collected with each child during the aforementioned data collection phases. The second portion illustrated the results of the SA English and SA Māori tasks, which were generated at the same collection points as the data sets relating to the IPI tasks. The researcher used the two standard deviation band method in order to represent results that were significantly above chance, and therefore were statistically significantly different to pre-intervention findings. This chapter also employed the contextual lens established in Chapter Four with regard to the home literacy environment and whānau literacy practices to offer some analysis of the results described in each section. This analysis indicated that the home literacy environment, including any shifts that occurred as a result of the intervention, had an impact on the phonological awareness abilities of the children participating in this study. However, it was noted in the opening statements of this chapter that these results will be examined in greater depth in Chapter Seven of this work, using the theoretical lenses constructed in Chapters Two and Three of this work to view and interpret the data sets described in this chapter.

In closing, this chapter contributes to the thesis overall by offering some insight into the phonological awareness skills of each child participating in this research. The data sets were presented in graphs which allowed the crossover design of the study to reveal if the shared book reading and activities each whānau completed in the SSS part of the intervention in particular, generated any shifts in the phonological awareness skills of their child. The data sets of every child indicated that the SSS portion of the intervention had significant effects on their phonological awareness skills. Following completion of the SSS component of the intervention, every child had made at least one gain significantly above chance in their ability to identify the initial phoneme in words, or to detect syllables in words, with the majority of the children improving significantly above chance in every assessment. Therefore, this chapter plays an essential role in shedding some light on the central research question asked in this work, specifically ‘What effect does a home-based literacy intervention have on the cognitive skills associated with children’s emerging literacy?’ where phonological awareness is recognised as being both a critical skill key to children experiencing success in their early literacy development, as well as a strong predictor of later literacy success.

The next chapter continues this line of enquiry by presenting and analysing data sets related to aspects of the oral language skills of each child participating in this study.

## **CHAPTER SIX: KEY ELEMENTS OF ORAL LANGUAGE**

Chapter Five of this work presented various series of data related to the phonological awareness skills of the children participating in this research, and offered some analysis of these sets using the contextual lens established in Chapter Four. More specifically, each child's ability to identify the syllables in English and te reo Māori words, together with their skills in detecting the initial phoneme in English and te reo Māori words, was assessed pre-, mid-, and post-intervention, as well as six months after the intervention ceased. The graphs depicting the results of these assessments revealed the influence of the shared book reading and activities on the children's phonological awareness skills, in particular those associated with the SSS portion of the intervention. This chapter continues to shed light on the efficacy of the intervention in creating positive shifts in the cognitive skills central to the children in this study experiencing early literacy success, in this case, in their oral language proficiency. Leyva et al. (2012) contend that both the number and quality of conversations whānau hold with their children play a significant role in the development of children's oral language proficiency. Key features to indicate a 'quality' conversation include the number of different words used, initiation of the conversation, use of rare words and open-ended questions, and explaining the meanings of new words. These strategies can stimulate a variety of abilities, including increased vocabulary knowledge, strong narrative development, and story comprehension skills (Pan et al., 2005). The intervention trialled in this study incorporated those strategies with the aim of creating positive shifts in the oral language skills of the children participating in this research.

Numerous sets of data are presented in this chapter, which relate to aspects of oral language – specifically, the vocabulary knowledge of the children, their story comprehension skills, and their ability to retell a story in English and te reo Māori. It has been acknowledged that Chapter Four holds an additional purpose in this thesis, where it acts as another lens through which to view and interpret the findings presented in Chapters Five and Six of this work. Therefore, data sets related to aspects of the oral language skills of each child are analysed through the contextual understanding offered in Chapter Four concerning the home literacy environment and literacy practices of the whānau participating in this research. However, like the findings presented in Chapters Four and Five of this work, the data sets presented

in this chapter will be analysed in depth in Chapter Seven of this thesis, using the various theoretical lenses constructed in Chapters Two and Three.

In keeping with the previous two chapters of this work, Chapter Six is divided into eight sections, with the results of each child included in a section of its own. Each section is divided into three components. The first part presents the findings of the PNT, which each child completed pre-, mid-, and post-intervention, as well as at the final data collection round conducted six months after the intervention had finished. The second portion of each section describes the results of the story comprehension questions each child was asked during the story retell tasks, in which the researcher used a book in English and te reo Māori, respectively. The final portion of each section presents the findings of the oral language samples collected as part of the story retell tasks. However, only English language samples are presented in this part of each section. While every child was able to listen to the story in te reo Māori, and answer comprehension questions relating to the story, they answered these questions, and retold the story in English. The researcher asked each child the questions in te reo Māori, but observed quickly that the children were unable to respond in that language. However, after the researcher translated the questions into English for the children, each child was able to answer the questions, thus indicating they understood the story in te reo Māori, but did not have a sufficient level of proficiency to respond to the questions, or to retell the story, in te reo Māori. Data collected during observations made at Nōku Te Ao, coupled with the percentage of time each child is exposed to te reo Māori in the home, suggest the children are able to understand instructional and ceremonial elements of te reo Māori, but have yet to achieve a level of skill in the language where they could perform the activities required of them during the te reo Māori story retell task. In other words, English is by far the dominant language for each child participating in this research. The first section of this chapter depicts data related to Atawhai.

## **6.1 Atawhai**

This section presents data related to elements of the oral language skills of Atawhai.

### 6.1.1 Picture Naming Task Results

Fig. 56 reveals the results of the PNT conducted with Atawhai pre-, mid-, and post-intervention.

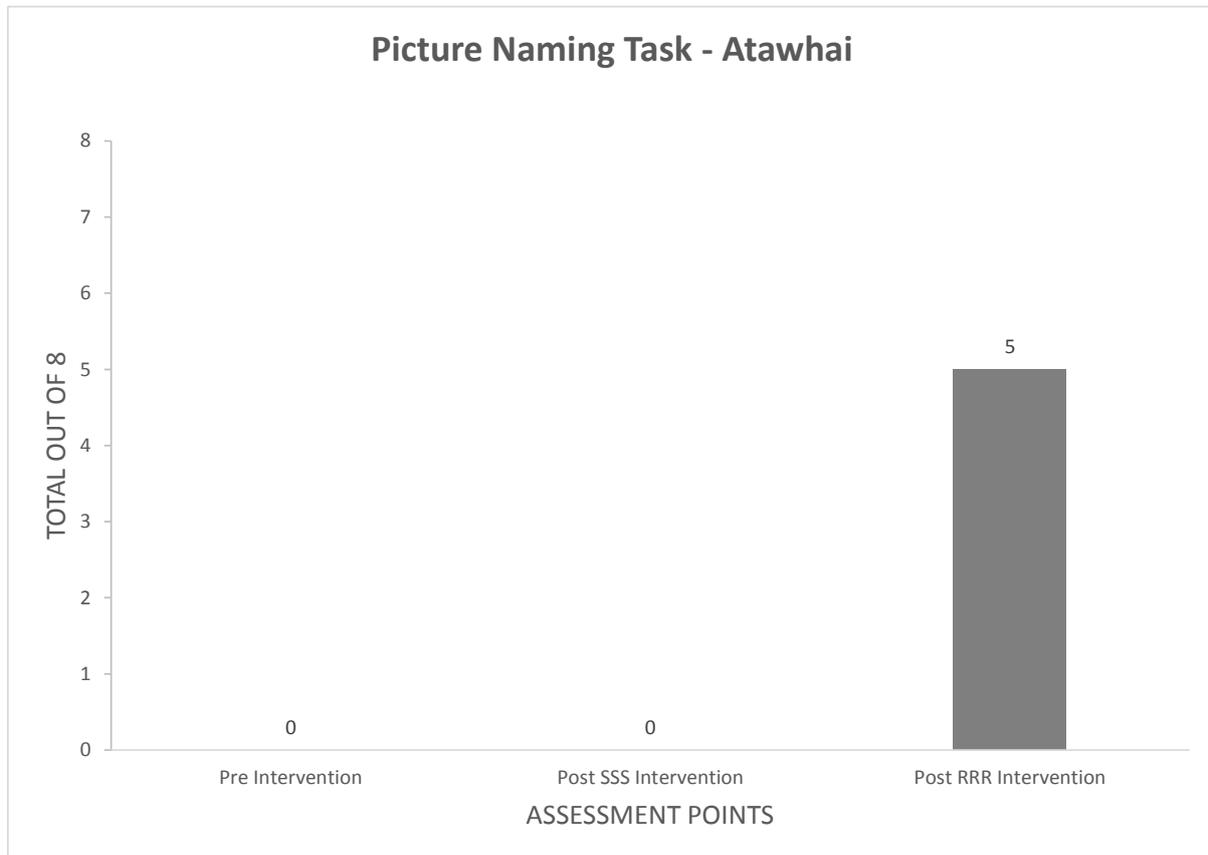


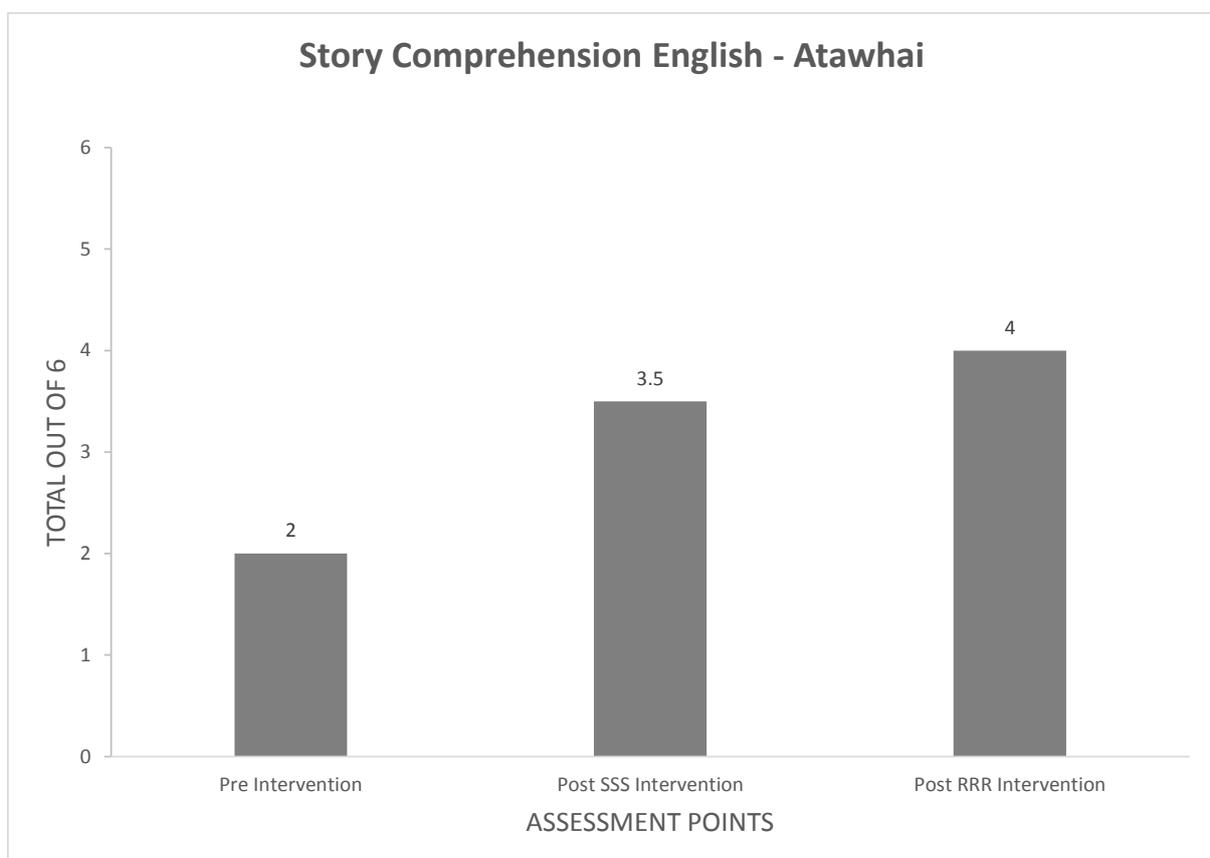
Figure 56. Picture Naming Task – Atawhai

Atawhai and her whānau completed the SSS portion of the intervention first, and this is evident in the results depicted in Fig. 56. It was discussed in Chapter Three of this work that one of the focal points of the RRR portion of the intervention was learning new vocabulary. Some of the tasks included in the sticker prompts used in the RRR shared book reading was pointing out new words by using the illustrations in various books. These pictures were then included in the PNT in order to determine if whānau explanations of unfamiliar words resulted in children learning new vocabulary. Atawhai's results show that, following completion of the SSS portion of the intervention, Atawhai was still unable to name the pictures in this assessment task but that, after her whānau explained these words to her during the RRR part of the intervention, she was able to correctly name five new words. This result supports the contention that whānau explaining the meanings

of new words serves to increase children’s vocabulary knowledge (Leyva et al., 2012). Six months after the intervention finished, Atawhai was able to recall 3 out of 8 words. The following part of this section presents data related to Atawhai’s story comprehension tasks.

### 6.1.2 Story Comprehension Results

Fig. 57 shows the results for Atawhai’s story comprehension questions in English.



*Figure 57.* Story Comprehension English – Atawhai

The results presented in Section 4.1 of Chapter Four of this work revealed Atawhai’s home literacy environment pre-intervention was strong. She had a high level of interest in reading, and her whānau engaged in shared book reading with Atawhai very frequently. This contextual understanding assists with interpretation of the results depicted in Fig. 57, where, pre-intervention, Atawhai scored relatively well in her ability to answer key comprehension questions. Mid- and post-intervention,

this skill improved further, and at the six-month data collection point, Atawhai scored 4 out of 6 in this task. Table 1 in Chapter Four shows that the reading style Atawhai’s mother used became more interactive as the intervention progressed, and these shifts contributed to an improvement in Atawhai’s ability to comprehend a story. This supports the contention put forward by Pan et al. (2005) that strategies, such as asking questions during shared book reading, can improve the oral language proficiency of a child.

The researcher acknowledges that each child may have become more familiar with the story at each data collection point. However, it has been noted that both the English and te reo Māori books used in the story retell tasks were no longer in publication. Therefore, the likelihood of each child hearing the story in between assessment points, where there was at least eight weeks, and up to six months, in between each data collection phase, was very low. Fig. 58 shows the results from the story comprehension task using the te reo Māori book.

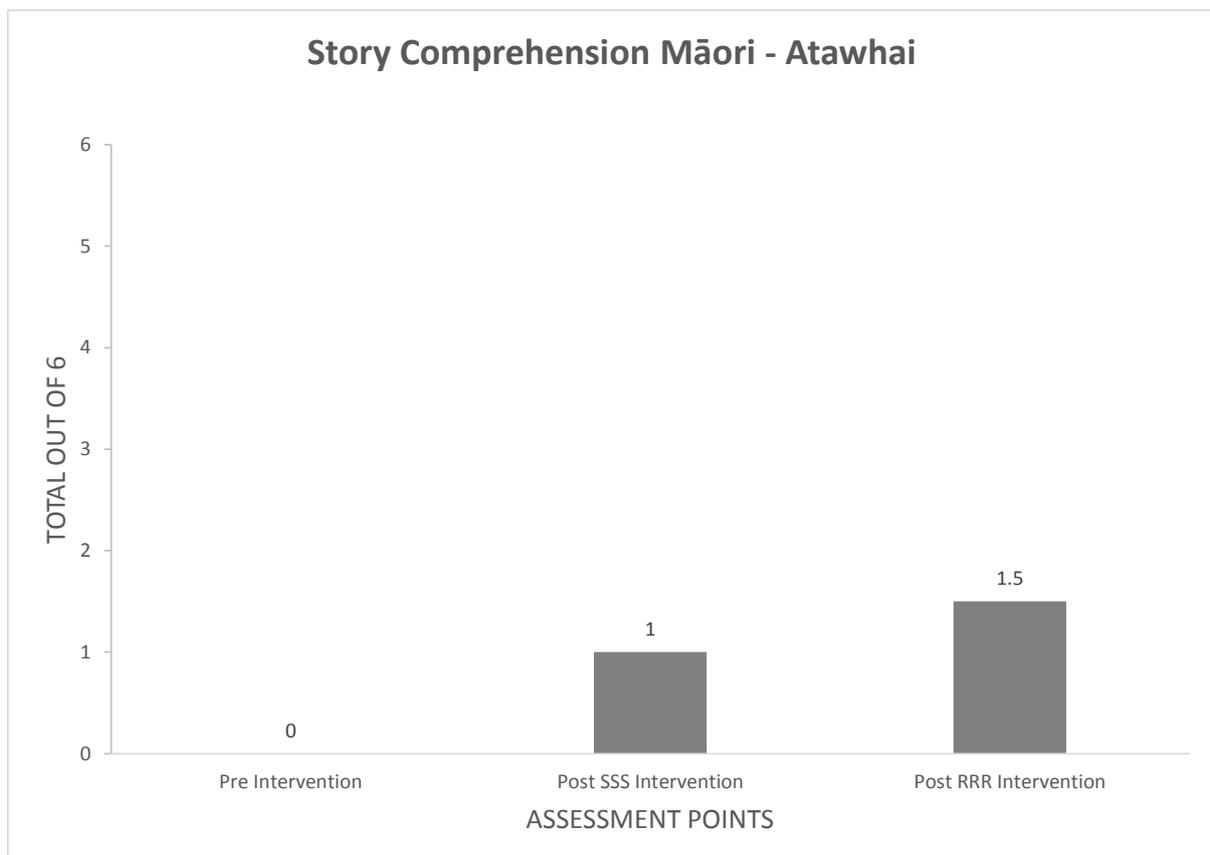


Figure 58. Story Comprehension Māori – Atawhai

Pre-intervention, Atawhai heard comparatively little te reo Māori in her home, however, her whānau made a lot of effort with the te reo Māori aspects of the intervention. Atawhai provided the answers to the story comprehension questions related to the te reo Māori book in English, but the results depicted in Fig. 58 indicate she had some comprehension of the story, which improved mid- and post-intervention. Atawhai scored 2.5 out of 6 at the six-month post-intervention data collection point. The final part of this section presents data related to the story retell conducted with Atawhai, in English, pre-, mid-, and post-intervention, as well as six months after the intervention finished.

### 6.1.3 Story Retell Results

Table 10 depicts the results of Atawhai’s oral language samples generated by the story retell. T1 represents pre-intervention, T2 mid-intervention, T3 post-intervention, and T4 illustrates the six-month follow up data collection phase.

<b>ACTIVITY</b>	<b>T1</b>	<b>T2</b>	<b>T3</b>	<b>T4</b>
<b>Total utterances</b>	6	15	17	18
<b>C&amp;I utterances<sup>34</sup></b>	4	12	16	16
<b>MLUw<sup>35</sup></b>	6.00	4.67	4.13	4.19
<b>Total words</b>	36	70	74	72
<b>Different words</b>	17	36	38	42

*Table 10. Story Retell Analysis – Atawhai*

It has been acknowledged that shifts in aspects of children’s oral language may take longer to occur than the duration of the intervention allowed (Paris, 2005). Therefore, the data sets presented in this chapter concerning the English story retell may not serve as a solid indicator of the efficacy of the intervention in supporting this aspect of oral language skills. In this task, Atawhai offered an oral

<sup>34</sup> ‘C&I’ stands for ‘complete and intelligible’.

<sup>35</sup> ‘MLUw’ stands for ‘mean length of utterances in words’

language sample at each data collection point. Table 10 shows that Atawhai had a reasonably high level of language proficiency pre-intervention, with aspects of the points of analysis improving during the course of the intervention. While there is little variance in MLUw, the remaining categories show substantial changes between T1 and T2, with some continued growth in T3 and T4.

## 6.2 Tia

This section reveals the findings of the various oral language assessments conducted with Tia.

### 6.2.1 Picture Naming Task Results

Fig. 59 illustrates the results of the PNT completed with Tia at each point of data collection.

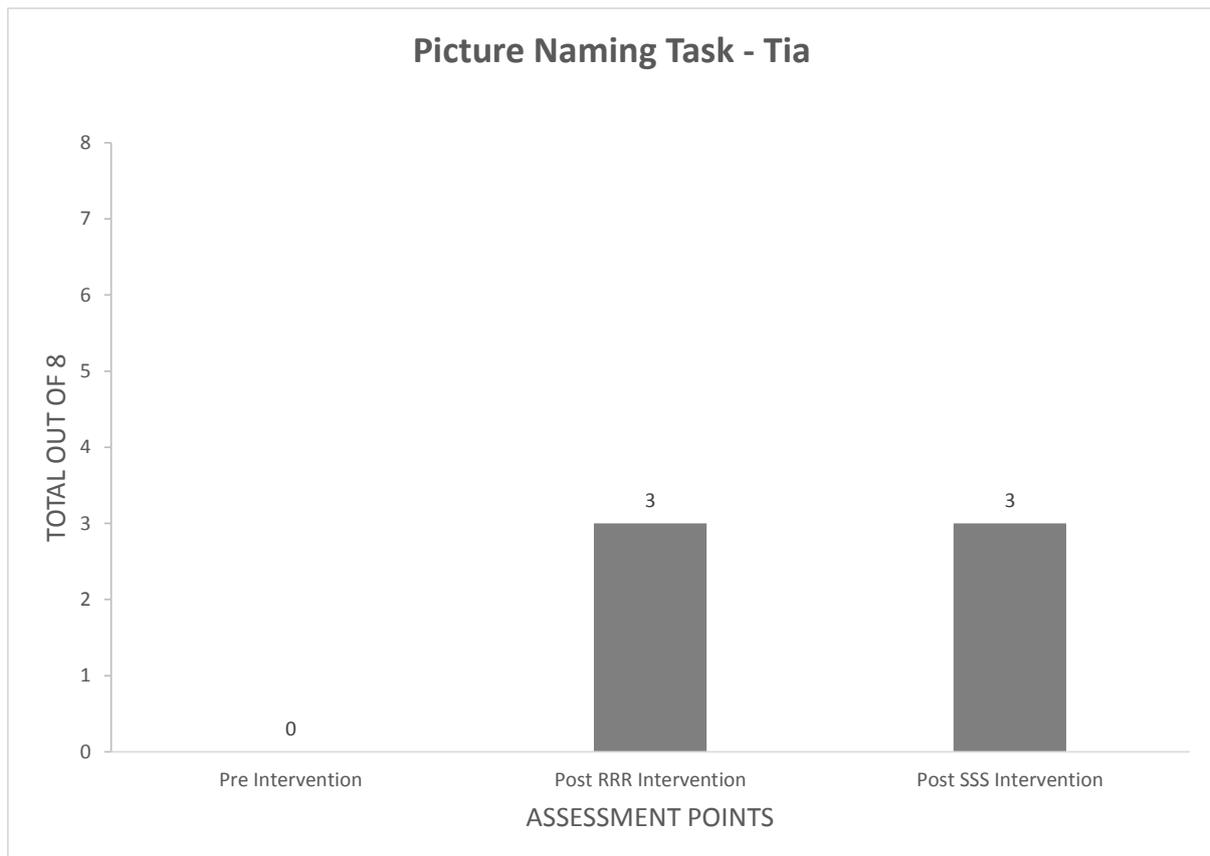


Figure 59. Picture Naming Task – Tia

Tia’s whānau completed the RRR portion of the intervention first, and the crossover design employed in this study shows the effects of the sticker prompts that targeted new vocabulary. Fig. 59 indicates that, after completing the RRR shared book reading and activities, Tia was able to name 3 out of 8 new words, and sustained this result post-intervention, as well as six months after the intervention finished. Again, these results support the assertion that children’s vocabulary knowledge can increase if whānau explain the meanings of new words to them. The next component of this section presents data related to the story comprehension tasks Tia completed at each data collection point.

### 6.2.2 Story Comprehension Results

Fig. 60 shows the results for Tia’s story comprehension questions in English.

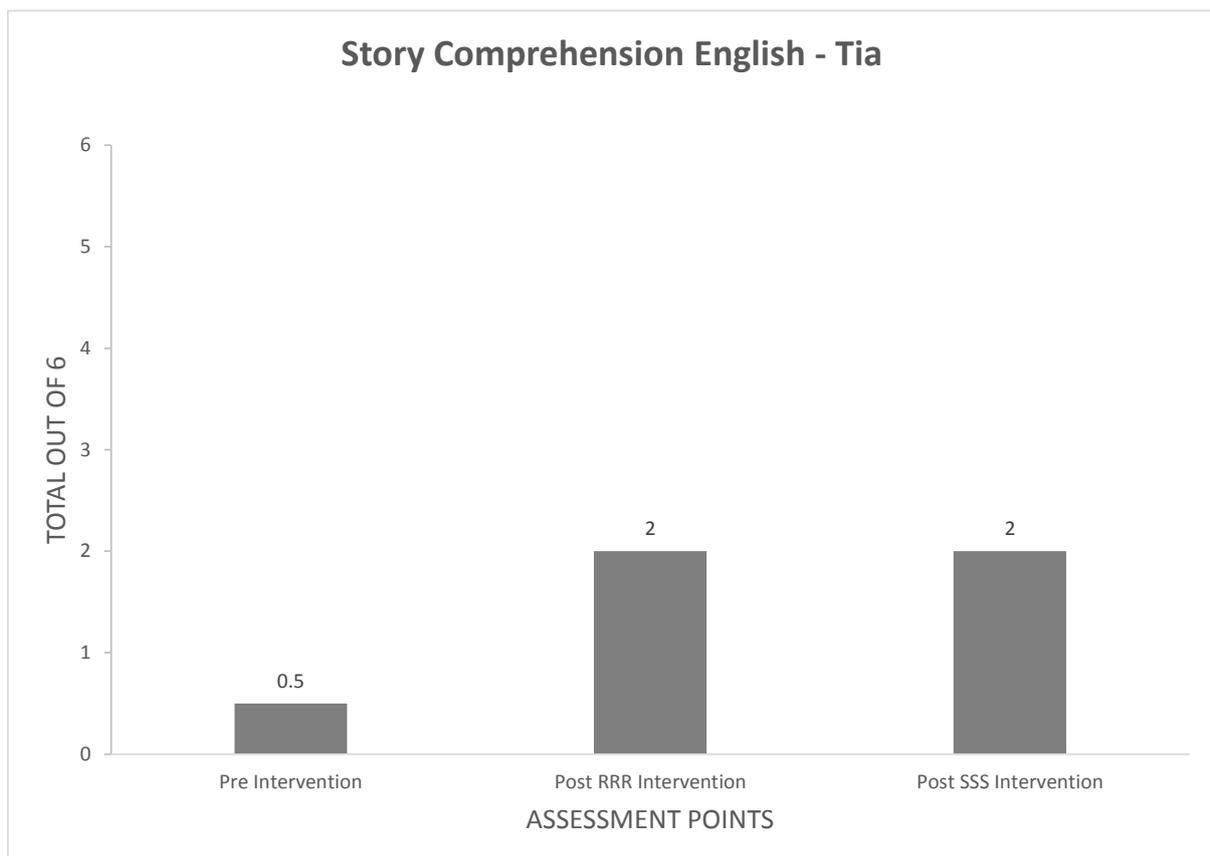


Figure 60. Story Comprehension English – Tia

Following the completion of the RRR activities, Tia’s ability to answer key comprehension questions about the English story improved, and she was able to sustain this level of understanding post-intervention. This improvement correlates with an increase in the level of interaction Tia had during shared book reading, as depicted in Table 2 in Chapter Four. Six months after the intervention finished, Tia scored 3 out of 6 on this assessment task. Fig. 61 shows Tia’s results from the story comprehension task using the te reo Māori book.

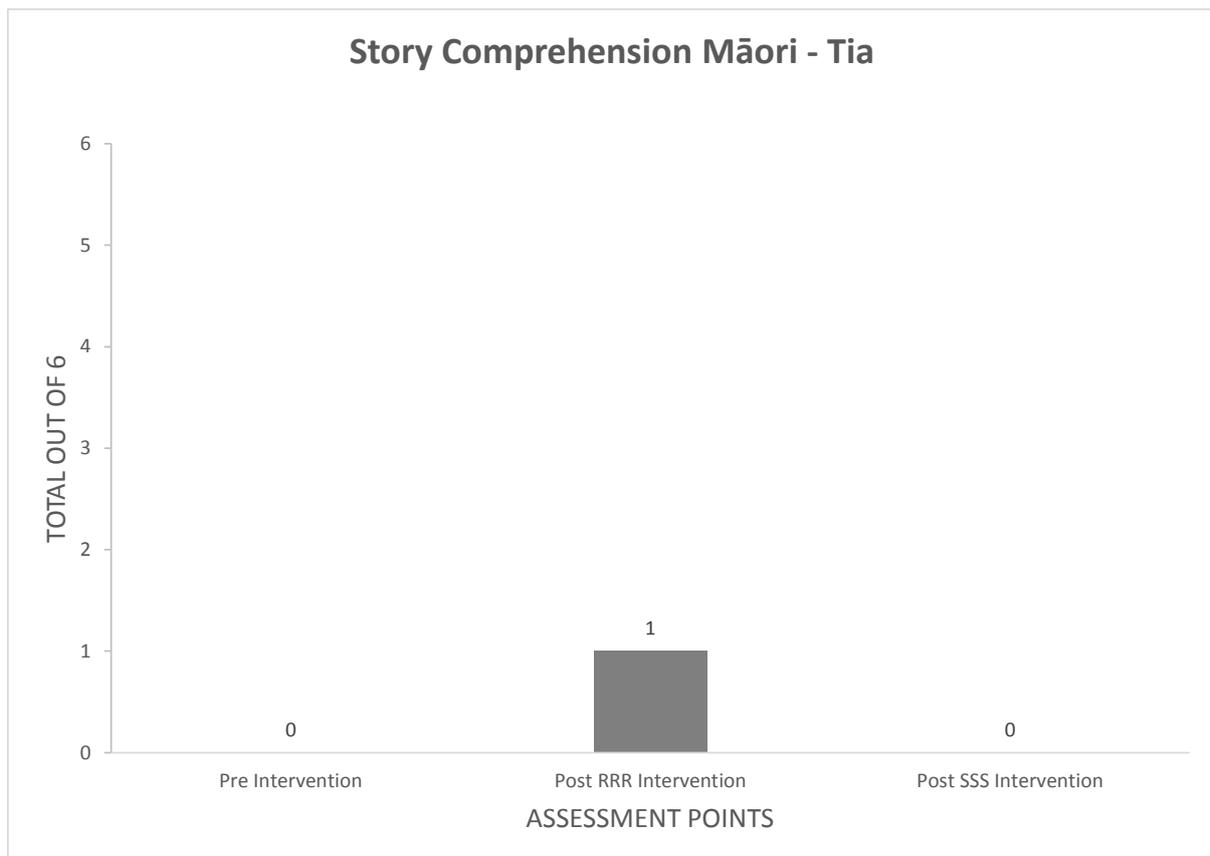


Figure 61. Story Comprehension Māori – Tia

In Chapter Four of this work, it was reported that Tia’s whānau found the te reo Māori books and activities challenging. Tia made a small gain in her ability to answer comprehension questions about the te reo Māori story, although this was not sustained post-intervention. However, at the six-month follow up data collection round, Tia scored 1.5 out of 6 on this task. The final part of this section presents data related to the English story retell Tia completed pre-, mid-, and post-intervention, as well as six months after the intervention finished.

### 6.2.3 Story Retell Results

Table 11 illustrates the results of Tia’s oral language samples generated by the story retell at the various data collection points.

<b>ACTIVITY</b>	<b>T1</b>	<b>T2</b>	<b>T3</b>	<b>T4</b>
<b>Total utterances</b>	9	15	5	13
<b>C&amp;I utterances</b>	8	10	5	11
<b>MLUw</b>	6.00	3.80	2.80	2.64
<b>Total words</b>	53	58	15	36
<b>Different words</b>	35	23	10	17

*Table 11. Story Retell Analysis – Tia*

At T1, T2, and T4 data collection points, the researcher was able to procure a retell of the English story from Tia. However, at T3, Tia did not want to recite the story. Table 11 reveals Tia had a reasonably high level of language proficiency pre-intervention, and patterns show she made significant gains between T1 and T2. T3 is recorded as an abandoned sample, which is evident in the results shown in Table 10. The figures depicted here relate to Tia conversing about matters other than the story. However, at T4, the trend that emerged at T2 continued, and shows continued growth when compared with pre-intervention results. These gains are consistent with changes to the reading style of Tia’s mother, illustrated in Chapter Four.

## **6.3 Kahu**

This section presents data related to elements of the oral language skills of Kahu.

### 6.3.1 Picture Naming Task Results

Fig. 62 illustrates the results of the PNT conducted with Kahu pre-, mid-, and post-intervention.

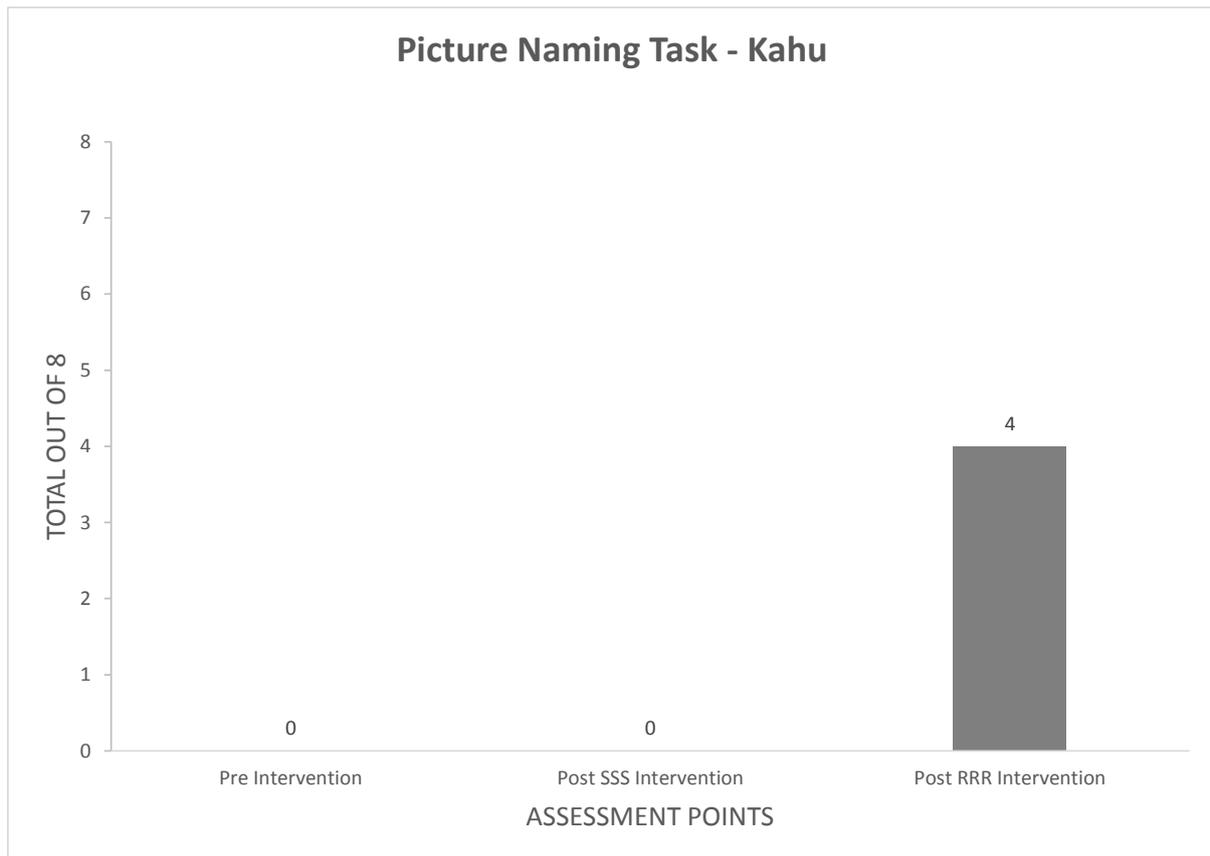
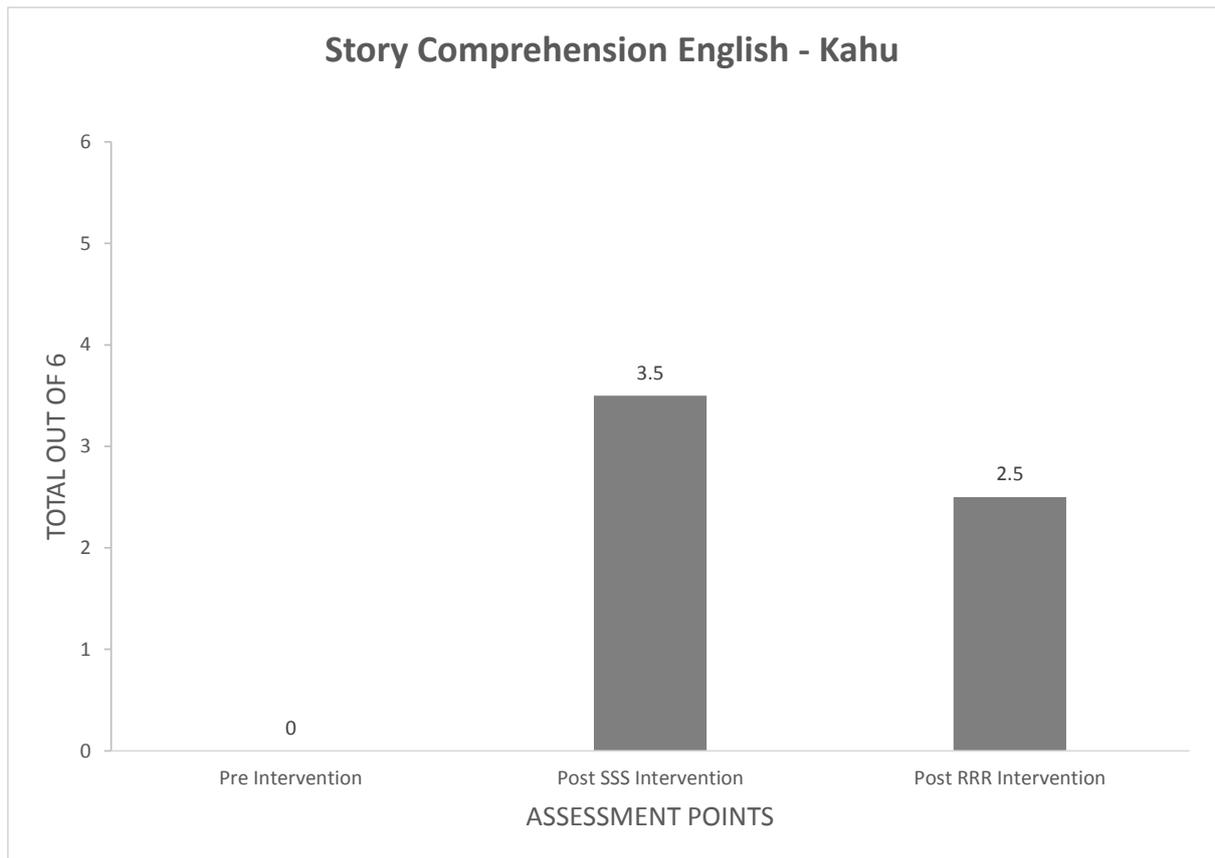


Figure 62. Picture Naming Task – Kahu

Kahu’s whānau completed the SSS portion of the intervention first, and this is illustrated in the results depicted in Fig. 62, where Kahu scored 0 out of 8 pre- and mid-intervention, but following the completion of the RRR shared book reading and activities, during which his whānau pointed out the meanings of new words, he scored 4 out of 8 on this task, a result he maintained six months after the intervention finished. The findings illustrated in Fig. 62 lend weight to claiming the effectiveness of the activities associated with the RRR component of the intervention, in particular, whānau explaining the meanings of new words. The following part of this section presents data related to Kahu’s story comprehension tasks in English and te reo Māori.

### 6.3.2 Story Comprehension Results

Fig. 63 illustrates the results of the English story comprehension task Kahu completed at each data collection point.



*Figure 63. Story Comprehension English – Kahu*

Kahu made substantial improvements during the intervention in his ability to answer key comprehension questions related to the English story. In Chapter Four of this work, Table 3 shows that the reading style employed by Kahu's mother became significantly more interactive as a result of the intervention, and this has contributed to the gains Kahu made in his ability to comprehend a story. At the six-month follow up data collection phase, he scored 4.5 out of 6 on this task. Fig. 64 shows Kahu's results from the story comprehension task using the te reo Māori book.

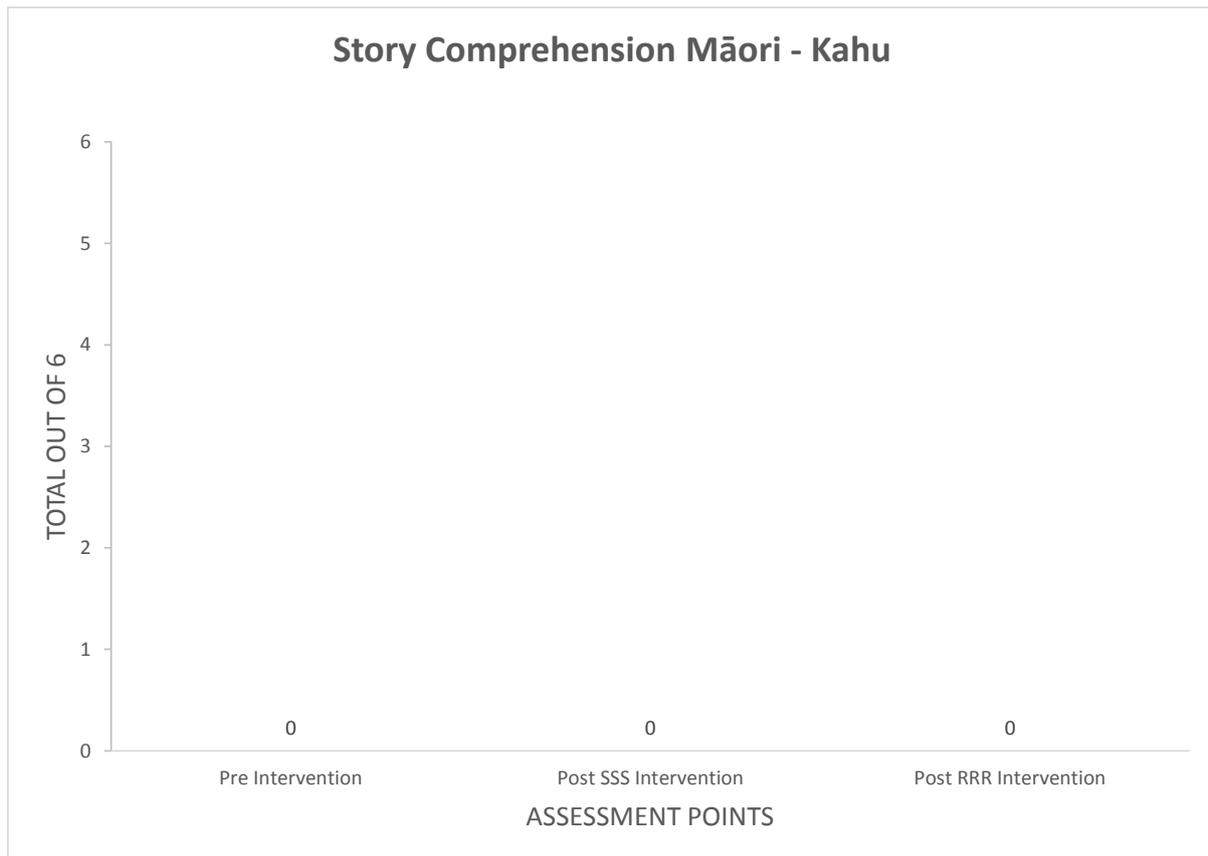


Figure 64. Story Comprehension Māori – Kahu

It was indicated in Chapter Four that Kahu’s mother struggled with the shared book reading and activities in te reo Māori, and the data collected on Kahu’s home environment reveal he hears comparatively little te reo Māori in the home. This contextual understanding assists in shedding light on the results depicted in Fig. 64, where Kahu was unable to answer comprehension questions about the te reo Māori story. Six months after the intervention ceased, he scored 2 out of 6 on this task. After the intervention ceased, Kahu started school at a bilingual primary school, where it is likely he is exposed to a higher level of te reo Māori than he was during the intervention. The final part of this section presents data related to the English story retell Kahu completed at the various data collection points.

### 6.3.3 Story Retell Results

Table 12 displays results from Kahu’s English story retell assessment task.

ACTIVITY	T1	T2	T3	T4
Total utterances	18	16	15	15
C&I utterances	14	12	10	12
MLUw	5.50	5.92	4.90	2.33
Total words	111	87	74	40
Different words	39	27	30	21

*Table 12. Story Retell Analysis – Kahu*

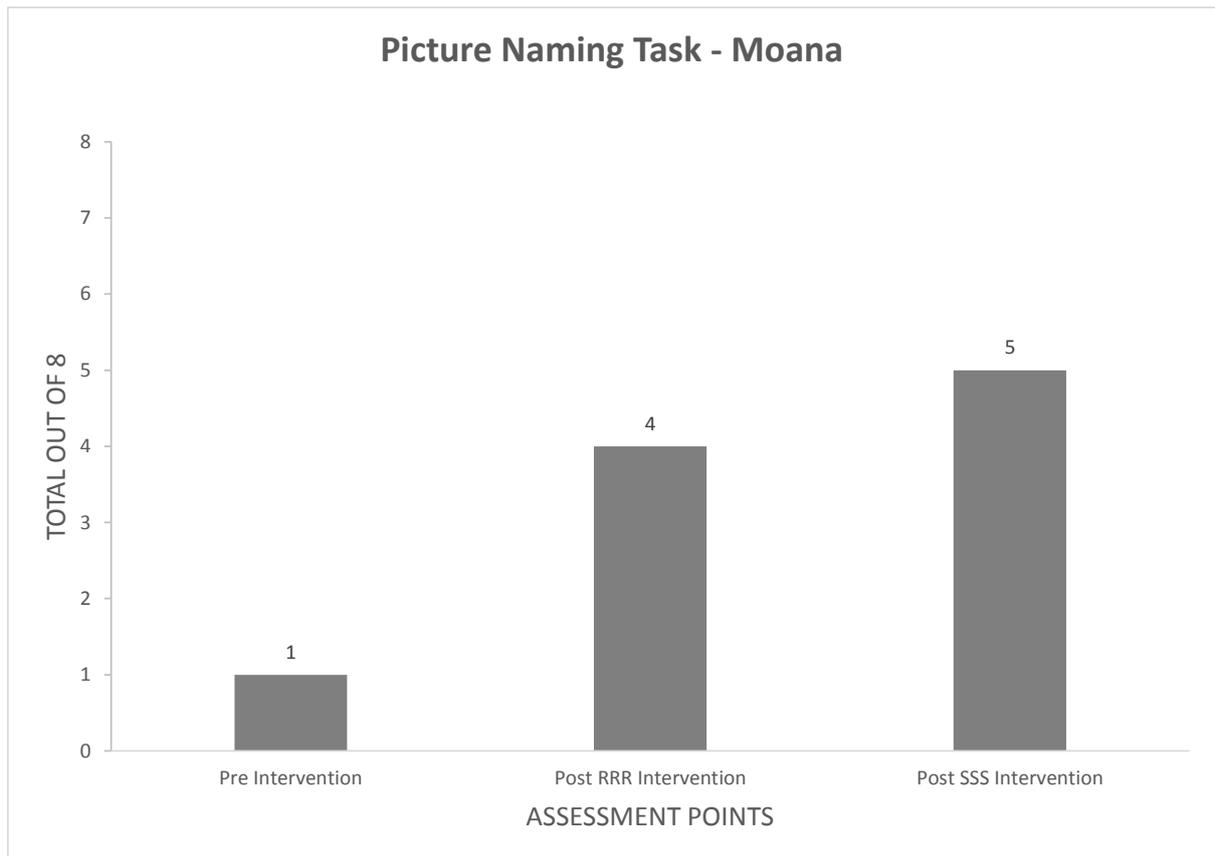
The results depicted in Table 12 indicate that Kahu had a relatively high level of language proficiency pre-intervention. No significant changes are evident between data collection points, and the T4 story retell task was abandoned. The figures depicted here relate to Kahu talking about matters other than the story.

## **6.4 Moana**

This section discusses the results of data generated at each collection point with Moana.

### 6.4.1 Picture Naming Task Results

Fig. 65 reveals the findings of the PNT Moana completed pre-, mid-, and post-intervention.

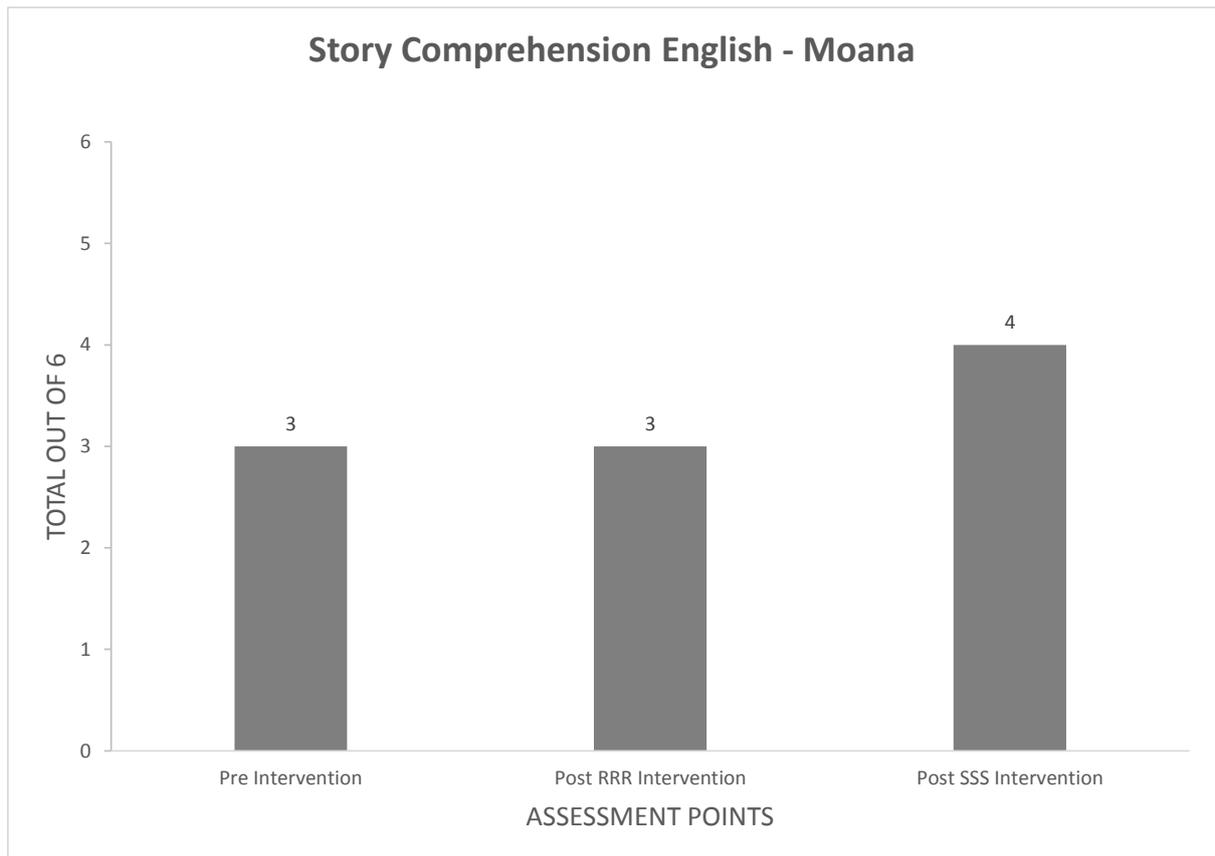


*Figure 65. Picture Naming Task – Moana*

Data collected with Moana’s whānau, which were presented in Chapter Four of this work, reveal that Moana had a strong interest in reading, and engaged in shared book reading very frequently. Pre-intervention, Moana scored 1 out of 8 in this task, and made significant and sustained improvements as the intervention progressed. Interestingly, she improved her vocabulary knowledge after completing the SSS portion of the intervention, which suggests she gained understanding of a new word from somewhere other than the intervention itself. Six months after the intervention ceased, Moana scored 5 out of 8 on this task. The following part of this section presents data related to Moana’s story comprehension tasks in English and te reo Māori.

#### 6.4.2 Story Comprehension Results

Fig. 66 illustrates the findings of Moana’s story comprehension assessment task in English.



*Figure 66.* Story Comprehension English – Moana

Moana’s home literacy environment offered good support, pre-intervention, for her emerging literacy. Her mother employed an interactive reading style, which was consolidated further during the course of the intervention, and this is evident in the results displayed in Fig. 66. Moana skills continued to grow as the intervention progressed, and at the six-month follow up data collection round, she scored 4.5 out of 6 in this task. Fig. 67 shows the results from Moana’s story comprehension assessment in te reo Māori.

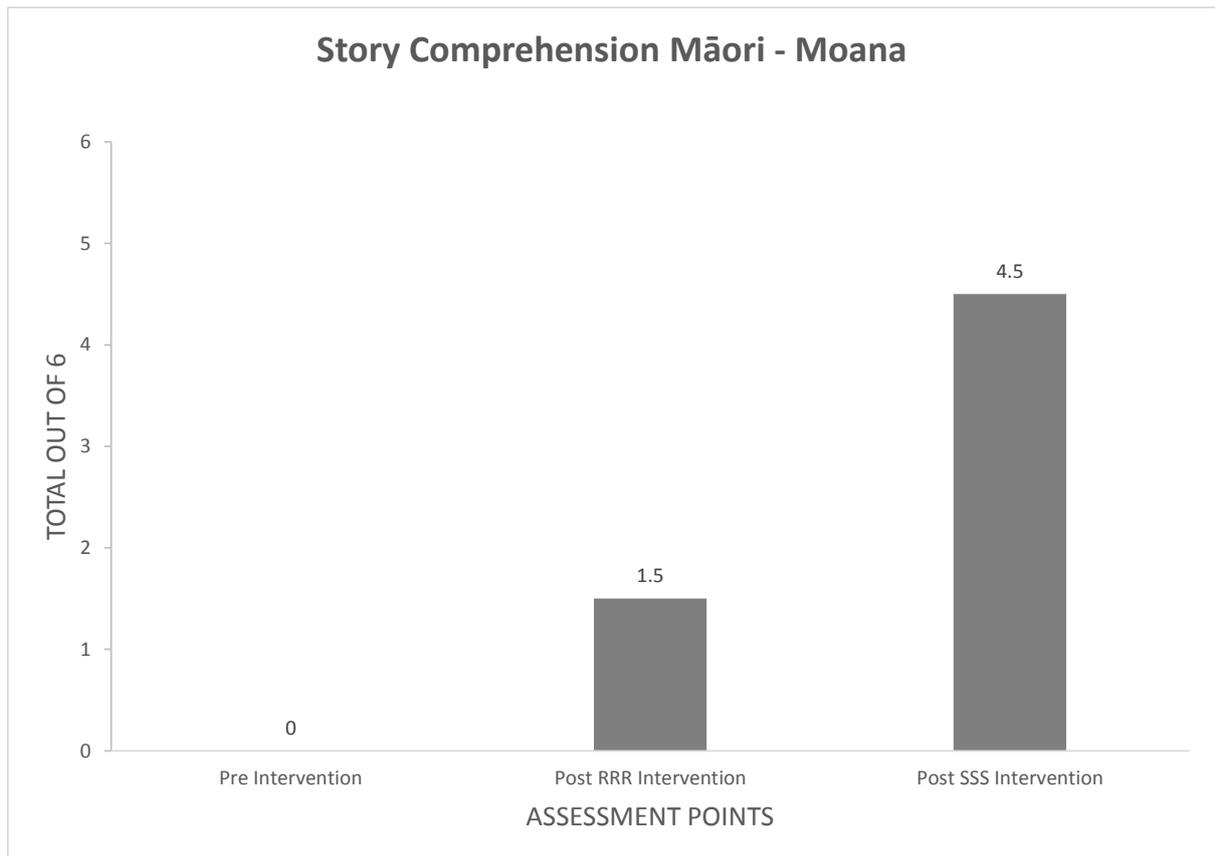


Figure 67. Story Comprehension Māori – Moana

Data presented in Chapter Four of this thesis, relating to the level of exposure Moana had to te reo Māori shows she heard comparatively little te reo Māori pre-intervention. However, her whānau had a relatively high level of engagement with the te reo Māori shared book reading and activities, and this engagement helped to strengthen her abilities to answer the key comprehension questions about the te reo Māori book. Moana completed the RRR portion of the intervention first, and following this, her ability to complete this task increased. Post-intervention, she consolidated her skills further, and six months after the intervention ceased, she scored 6 out of 6 on this assessment task. The final part of this section discusses the findings of Moana’s English story retell.

#### 6.4.3 Story Retell Results

Table 13 displays the results of the English story retell assessment task, completed with Moana at the various data collection points.

ACTIVITY	T1	T2	T3	T4
Total utterances	10	8	6	16
C&I utterances	10	8	5	15
MLUw	5.80	7.75	5.80	4.80
Total words	65	66	32	90
Different words	31	46	20	45

*Table 13. Story Retell Analysis – Moana*

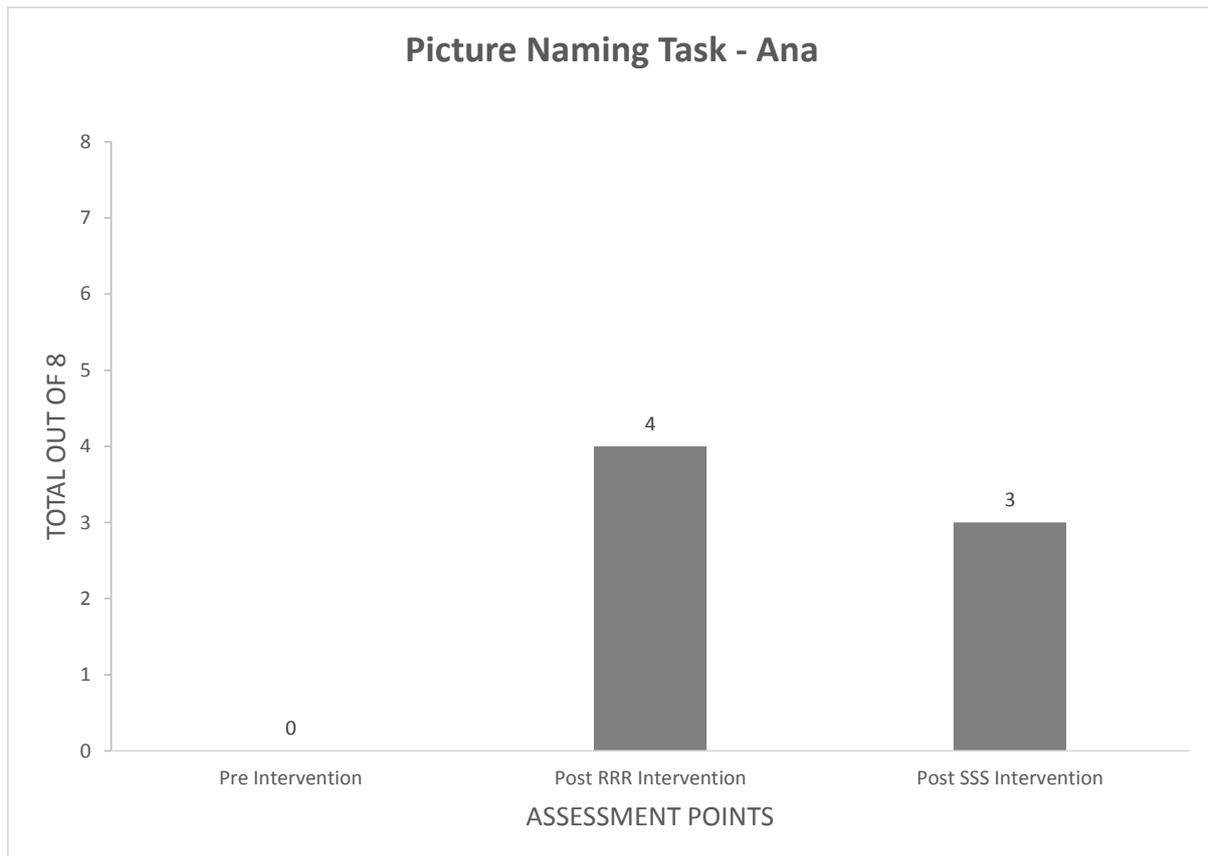
Moana provided an oral language sample at each data collection point. Pre-intervention, Moana had a relatively high level of oral language skills, and, by T4, patterns show she had made substantial gains in her ability in this area, improving in virtually every category of analysis.

## **6.5 Ana**

This section presents data related to elements of the oral language skills of Ana.

### 6.5.1 Picture Naming Task Results

Fig. 68 reveals the results of the PNT conducted with Ana pre-, mid-, and post-intervention.



*Figure 68. Picture Naming Task – Ana*

Following the trend set by other children who completed the RRR portion of the intervention first, Fig. 68 shows that, pre-intervention, Ana was unable to name the new words in the PNT, but after her whānau taught her the meanings of the new words described in the sticker prompts, she scored 4 out of 8 on this task. She maintained this result post-intervention and at the six-month follow up data collection point, scoring 3 out of 8 each time. The following part of this section presents data related to Ana’s story comprehension tasks in English and te reo Māori.

#### 6.5.2 Story Comprehension Results

Fig. 69 displays the results from Ana’s English story comprehension assessment task.

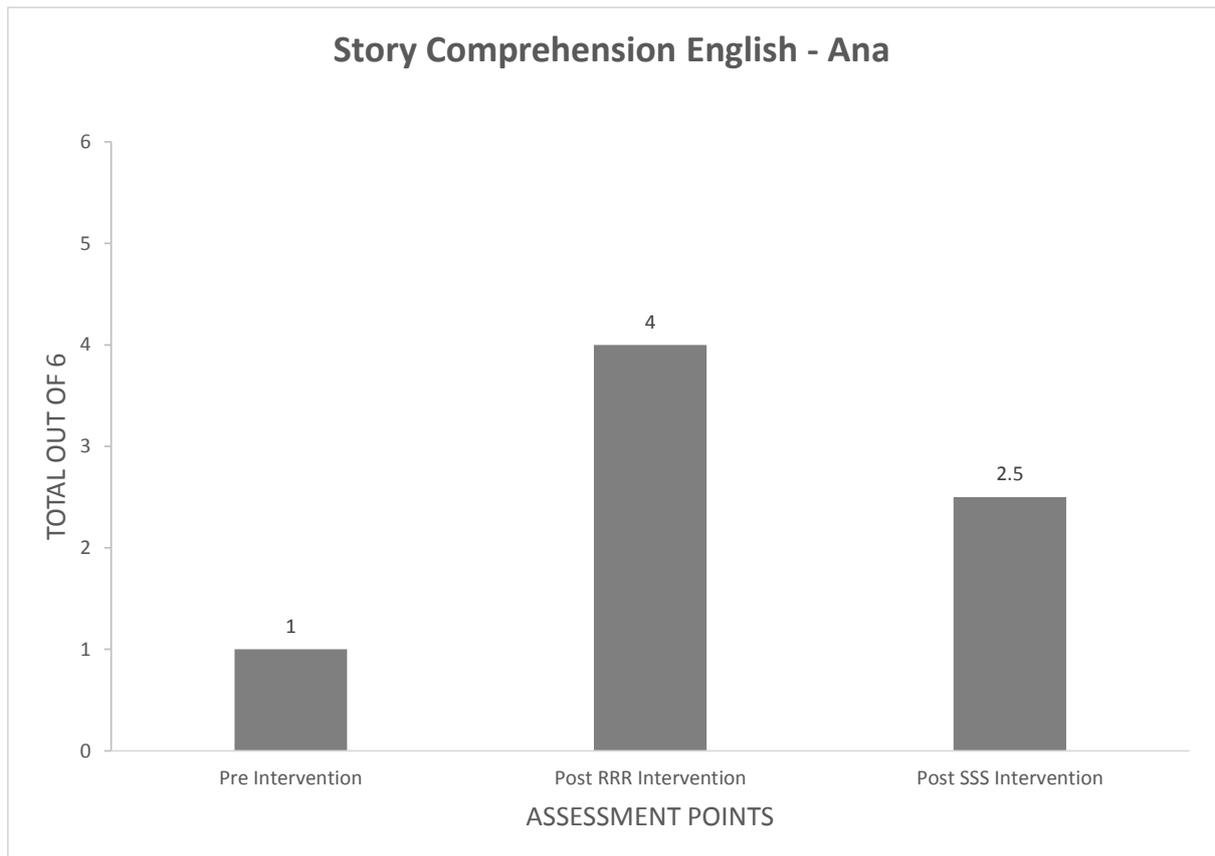


Figure 69. Story Comprehension English – Ana

Despite her whānau reporting a comparatively low level of engagement in the intervention, following Ana’s completion of the RRR portion of the intervention, she improved significantly in the English story comprehension task. The engagement of Ana’s whānau in the intervention was strongest in the first few weeks, which explains the improvement Ana made at the mid-intervention data collection phase. Post-intervention, and six months after the intervention finished, she scored 2.5 out of 6. Fig. 70 displays the results of the same task completed with a book in te reo Māori.

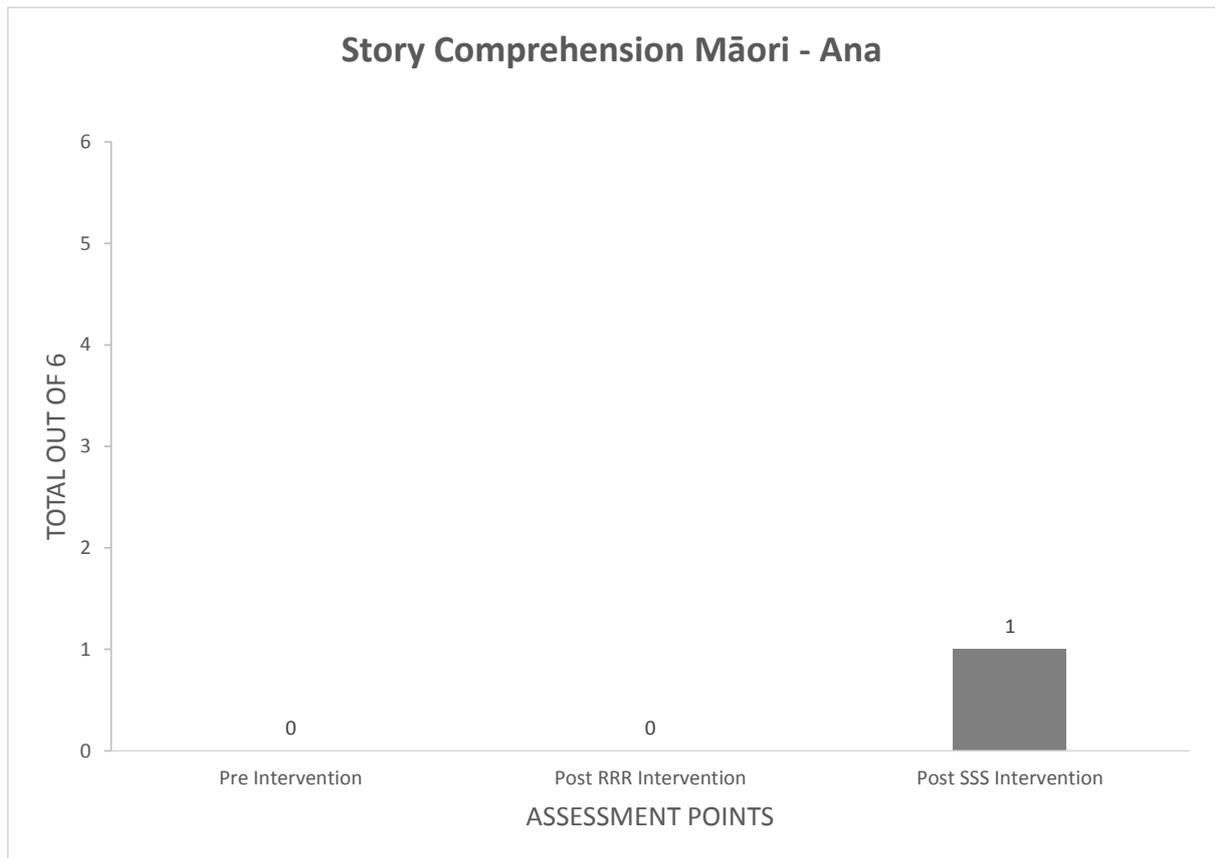


Figure 70. Story Comprehension Māori – Ana

Ana’s whānau had a comparatively low level of engagement during the intervention, and Fig. 70 reveals that, unlike the positive shifts illustrated in Fig. 69, few changes occurred in her ability to answer story comprehension questions about the te reo Māori book. Six months after finishing the intervention, Ana scored 1.5 out of 6 in this assessment task. The final part of this section presents data related to the story retell task Ana completed at the various data collection points.

### 6.5.3 Story Retell Results

Table 14 shows the results of Ana’s English story retell assessment task.

ACTIVITY	T1	T2	T3	T4
Total utterances	6	14	6	8
C&I utterances	6	13	5	7
MLUw	4.33	5.23	5.20	6.00
Total words	27	77	29	44
Different words	16	43	19	19

*Table 14. Story Retell Analysis – Ana*

The engagement Ana’s whānau had in the intervention primarily occurred during the first few weeks, and this may offer an explanation for the substantial growth evident at T2. This largely subsided at T3, although some gains are present at T4. The following section explores data related to aspects of the oral language skills of Tama.

## **6.6 Tama**

This section presents data related to elements of the oral language skills of Tama.

### 6.6.1 Picture Naming Task Results

Fig. 71 illustrates the results of the PNT conducted with Tama pre-, mid-, and post-intervention.

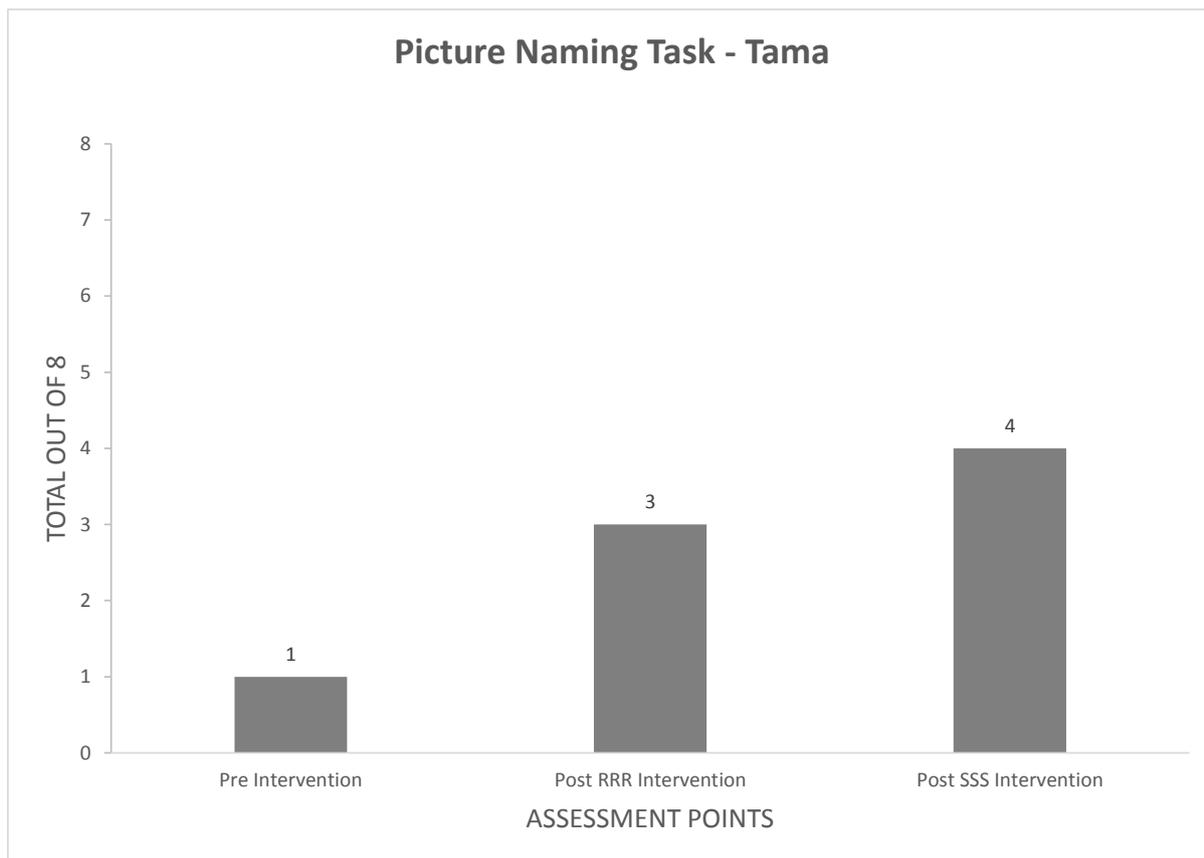
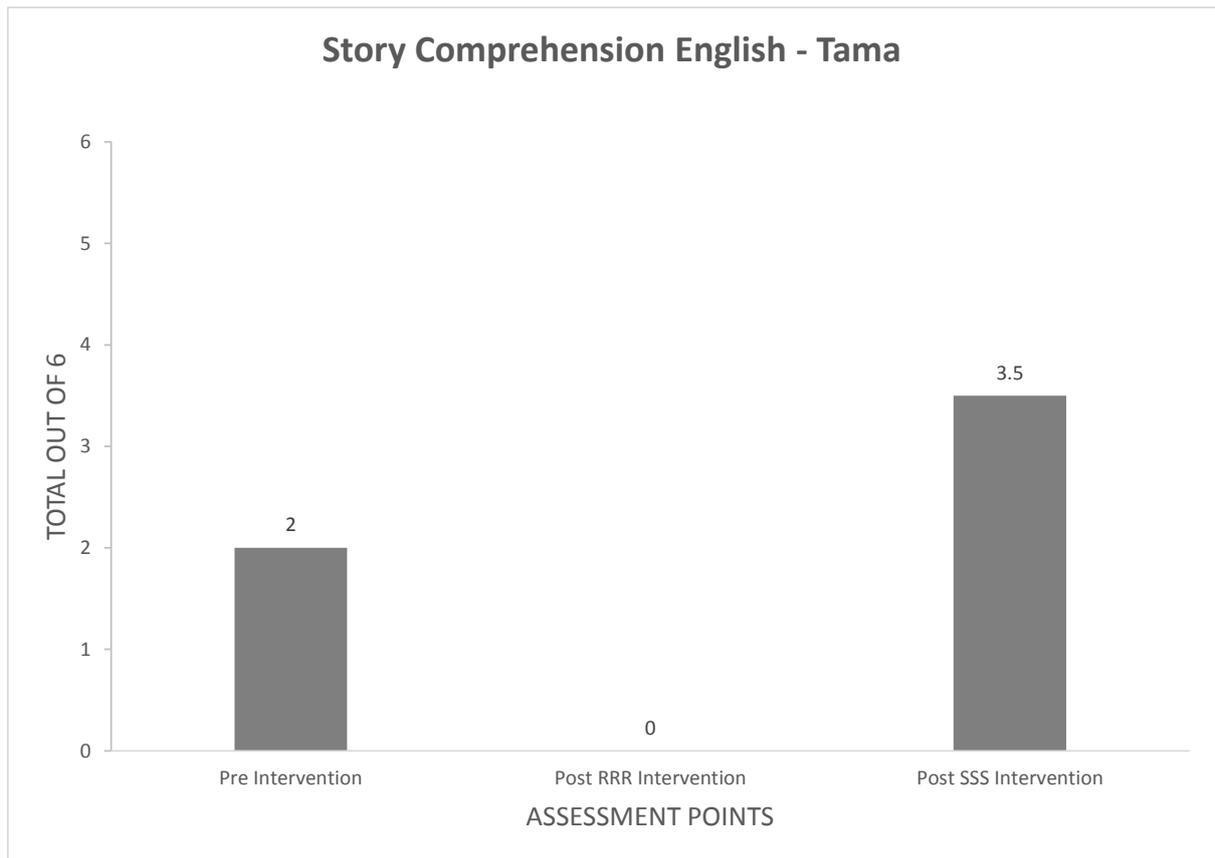


Figure 71. Picture Naming Task – Tama

Tama performed comparatively well on this task pre-intervention, and continued to make steady gains mid- and post- intervention. Tama’s whānau completed the RRR portion of the intervention first, and this is evident in the results displayed in Fig. 71. Interestingly, like Moana, Tama increased the number of words he was able to explain following the SSS portion of the intervention, suggesting he acquired some understanding of a new word from somewhere other than the RRR shared book reading activities. Six months after completing the intervention, Tama scored 4 out of 8 on this task. The following part of this section presents data related to Tama’s story comprehension tasks in English and te reo Māori.

#### 6.6.2 Story Comprehension Results

Fig. 72 shows the results of Tama’s English story comprehension assessment task.



*Figure 72. Story Comprehension English – Tama*

Despite his whānau reporting Tama has a relatively low level of interest in reading, Tama scored well on this task pre-intervention. He did not wish to engage in the assessment task mid-intervention, although some gains were revealed post-intervention. He maintained this result six months after he finished the intervention, scoring 3.5 out of 6 on this task. Fig. 73 shows Tama’s results for the story comprehension task in te reo Māori.

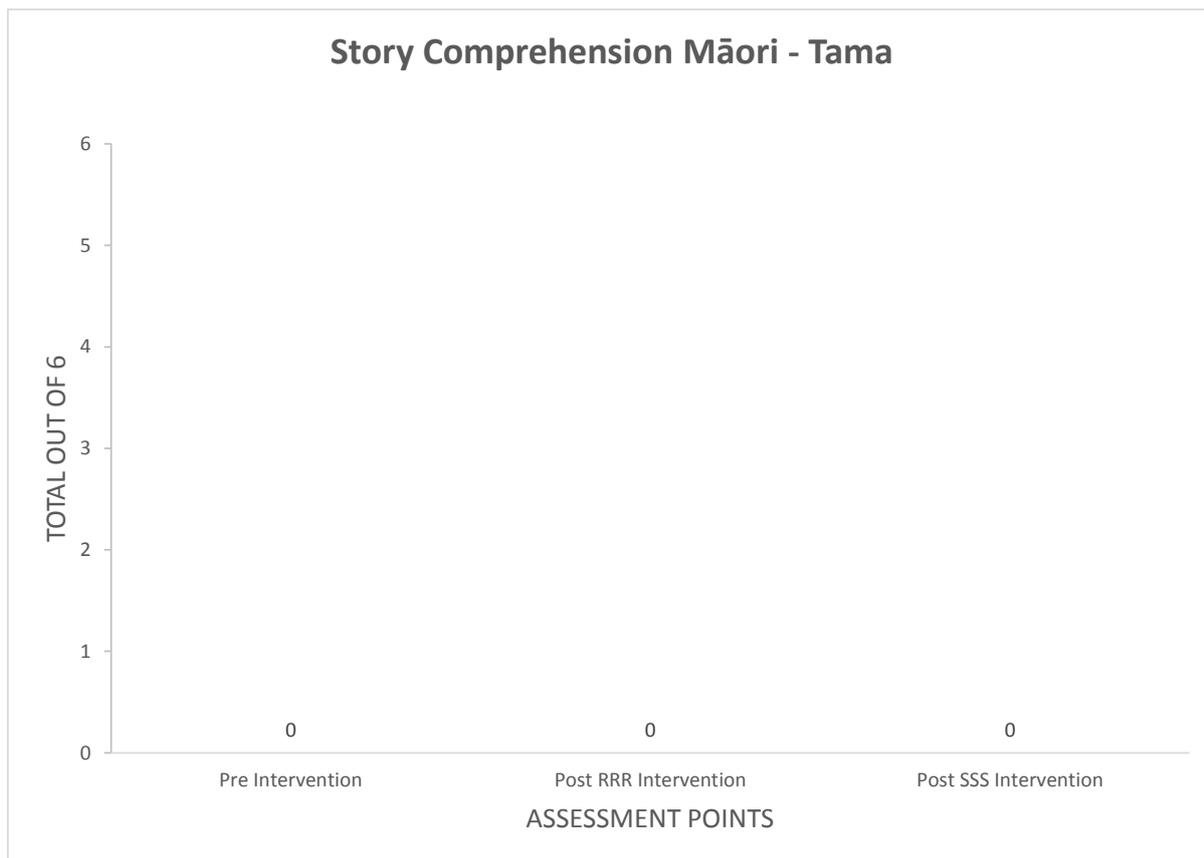


Figure 73. Story Comprehension Māori – Tama

Tama did not wish to engage in this task pre-, mid-, or post-intervention, although answered some questions six months after the intervention finished, scoring 2 out of 6 on this assessment task. The final part of this section presents data related to the English story retell Tama completed at the various data collection points.

### 6.6.3 Story Retell Results

Table 15 displays the results of the English story retell assessment task completed with Tama.

ACTIVITY	T1	T2	T3	T4
Total utterances	0	0	2	22
C&I utterances	0	0	2	19
MLUw	0.00	0.00	1.00	6.47
Total words	0	0	2	201
Different words	0	0	2	57

*Table 15. Story Retell Analysis – Tama*

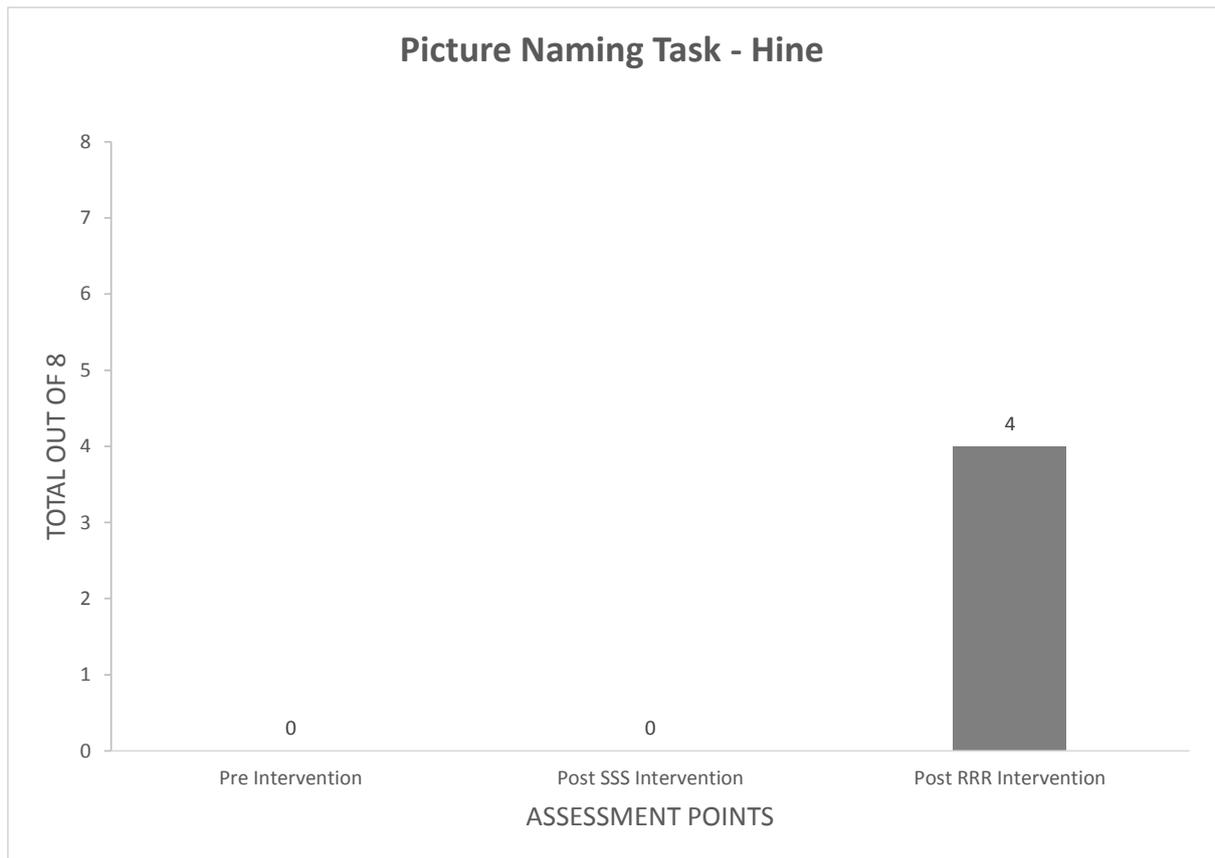
The researcher was unable to obtain an oral language sample from Tama at T1, T2, or T3, and the assessments at these points were abandoned. The figures recorded at T3 relate to Tama conversing about matters other than the story. However, at T4, Tama’s oral language sample indicates an extraordinarily high level of oral language proficiency. Unfortunately, the results at T4 are unable to be compared with data sets collected in the previous phases. However, it should be noted that in Chapter Four, data sets illustrated in Table 7 show that during shared book reading, the rate at which Tama’s mother pointed out key features of the story increased as a result of the intervention, and this change may have contributed to the high level of oral language ability evident in Tama’s T4 results.

## **6.7 Hine**

This section discusses the results of data generated at each collection point with Hine.

### 6.7.1 Picture Naming Task Results

Fig. 74 reveals the findings of the PNT Hine completed pre-, mid-, and post-intervention.

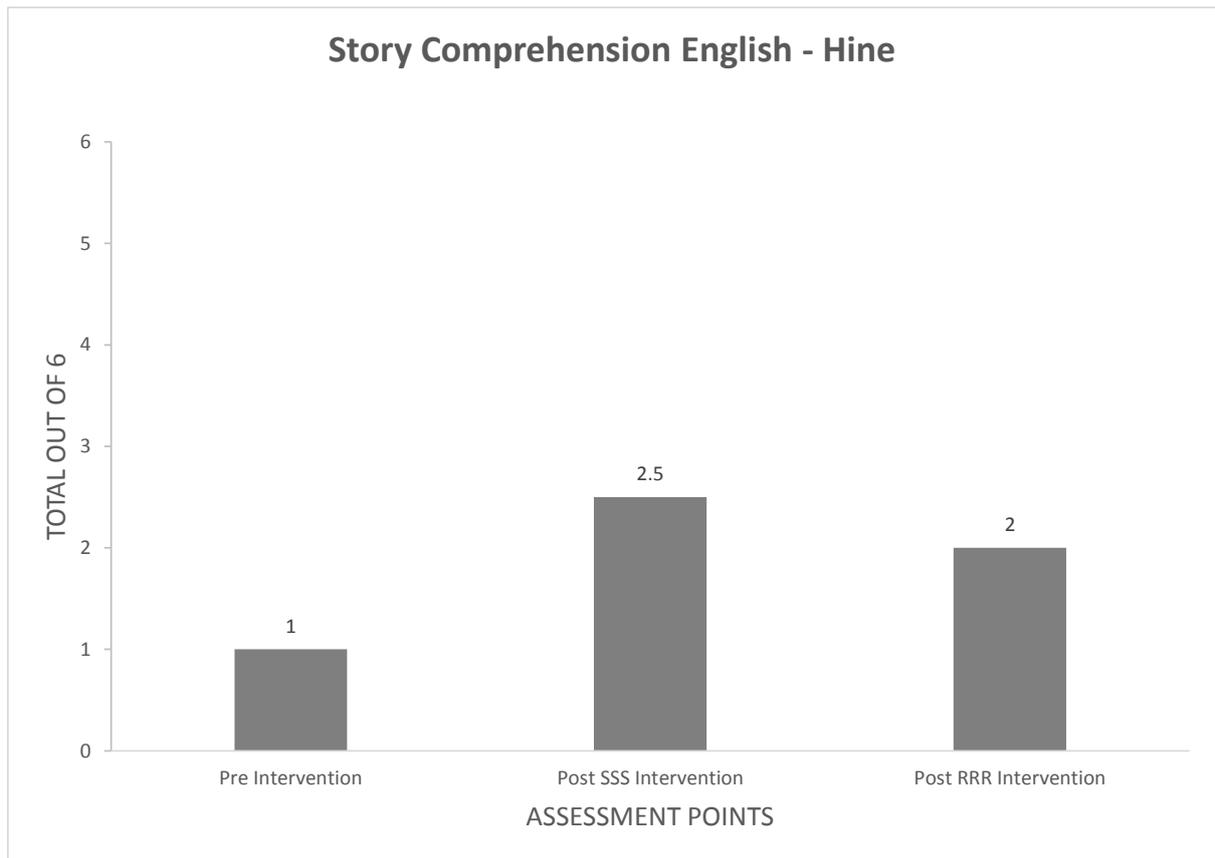


*Figure 74.* Picture Naming Task – Hine

Hine’s whānau completed the SSS portion of the intervention first, and again, the crossover design of the study reveals the efficacy of the sticker prompts in creating positive shifts in the vocabulary knowledge of the children participating in this study. Six months after the intervention finished, Hine scored 3 out of 8 on this task. The following portion of this section presents data related to the story comprehension tasks Hine completed at the various data collection points.

### 6.7.2 Story Comprehension Results

Fig. 75 displays the results of the English story comprehension task Hine completed pre-, mid-, and post-intervention.



*Figure 75. Story Comprehension English – Hine*

Hine’s ability to answer key comprehension questions improved as the intervention progressed, and six months after the intervention ceased, she scored 3.5 out of 6 on this task. Data presented in Table 7 in Chapter Four show Hine’s mother used a more interactive reading style as a result of the intervention, and this increased significantly particularly after completing the RRR component of the intervention. Fig. 76 illustrates the results of the story comprehension task, which used a te reo Māori book.

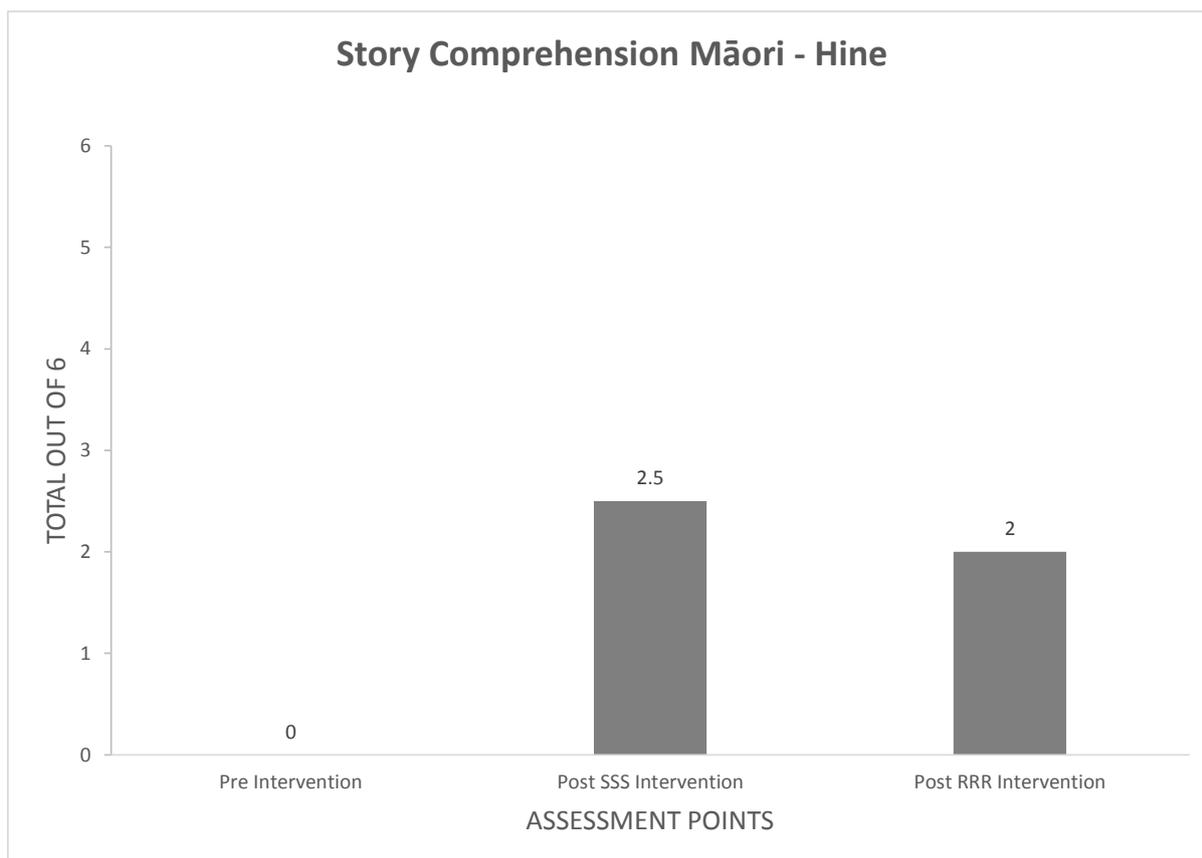


Figure 76. Story Comprehension Māori – Hine

Following an almost identical trend to the results displayed in Fig. 75, the graph depicted above shows Hine improved in her ability to answer comprehension questions at the mid-intervention data collection point, and despite a small decline post-intervention, continued to strengthen her skills six months after the intervention finished, scoring 3 out of 6 on this assessment task. The following portion of this section reveals the story retell data collected with Hine.

### 6.7.3 Story Retell Results

Table 16 displays the results of Hine’s English story retell assessment tasks.

ACTIVITY	T1	T2	T3	T4
Total utterances	20	20	20	12
C&I utterances	14	17	19	11
MLUw	4.86	4.82	4.58	2.82
Total words	91	101	96	33
Different words	34	54	43	22

*Table 16. Story Retell Analysis – Hine*

In this task, Hine offered an oral language sample at T1, T2, and T3 data collection points. However, the researcher was unable to obtain an oral language sample from Hine at T4, and abandoned the assessment. The figures depicted at T4 relate to Hine conversing about matters other than the story. Table 16 shows that Hine had a reasonably high level of language proficiency pre-intervention, which is consistent with the data sets relating to Hine that were presented in Chapters Four and Five of this work. The patterns illustrated in the above table reveal consistent changes between T1 and T2, with some continued growth in T3. The final section of this chapter presents data related to aspects of the oral language skills of Aroha.

## **6.8 Aroha**

This section presents data related to elements of the oral language skills of Aroha.

### 6.8.1 Picture Naming Task Results

Fig. 77 reveals the results of the PNT conducted with Aroha pre-, mid-, and post-intervention.

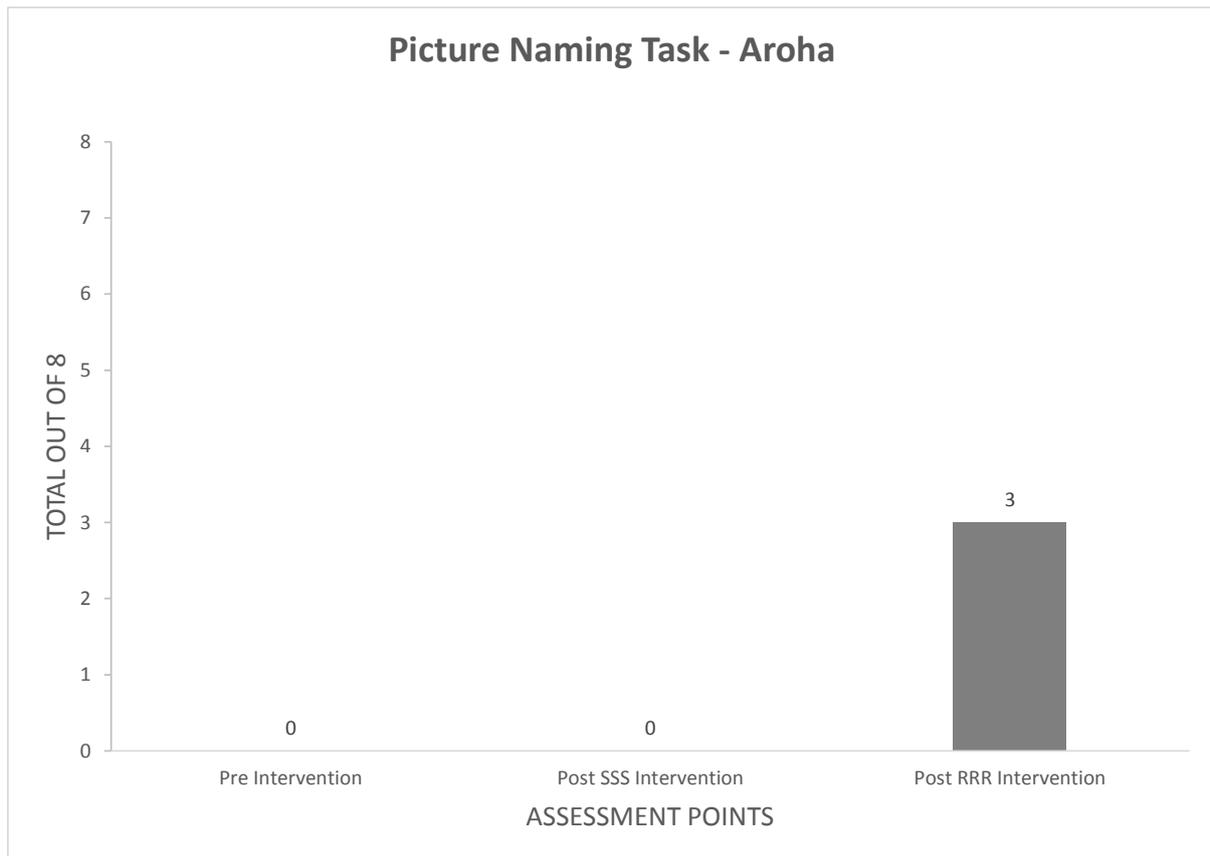
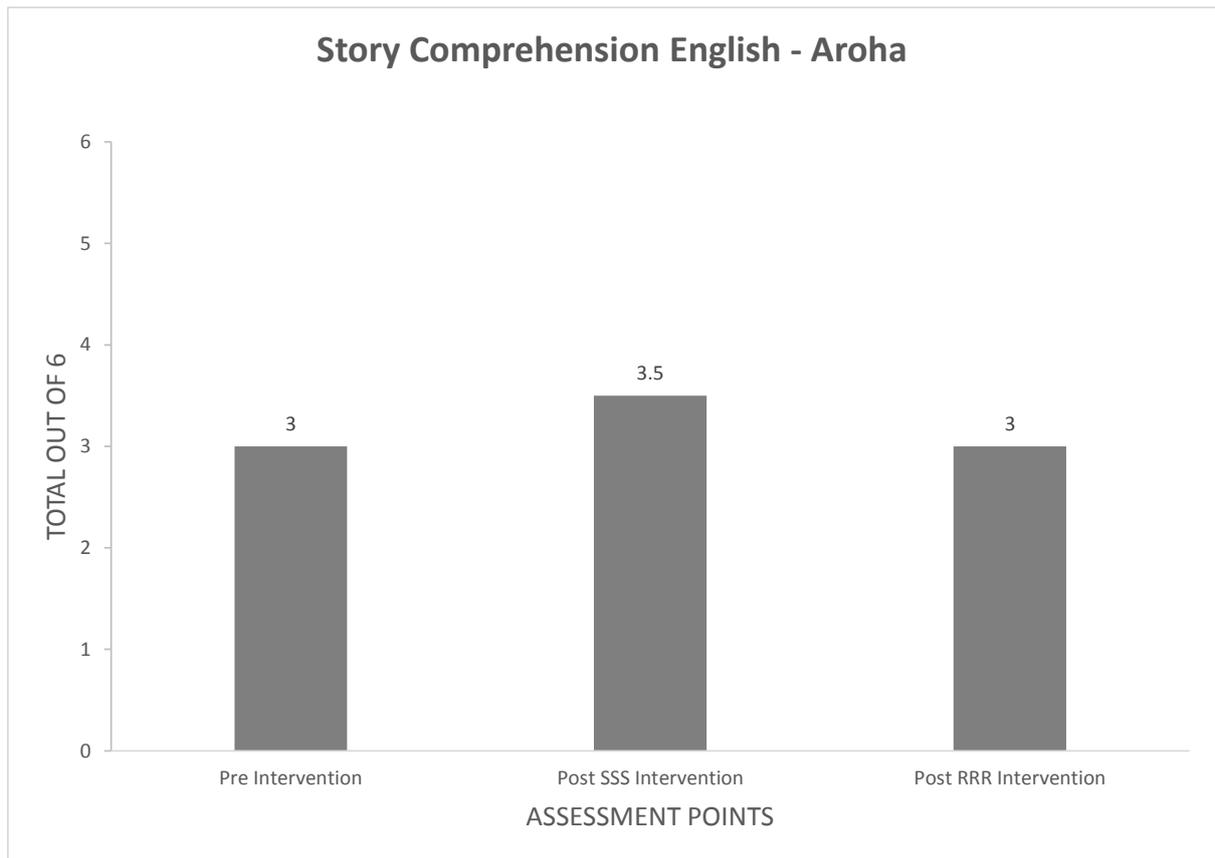


Figure 77. Picture Naming Task – Aroha

Like the results of other children described in the preceding sections of this chapter, the crossover design of the study clearly shows the effectiveness of the sticker prompts in helping the children to acquire new vocabulary. Following completion of the RRR activities and shared book reading, Aroha scored 3 out of 8 on this assessment task, and improved on this result six months after the intervention ceased, scoring 4 out of 8. Like Tama and Moana’s results for the PNT task, this suggests she acquired understanding of one of the words in the assessment task from somewhere other than the targeted sticker prompts. The following portion of this section presents data related to the story comprehension tasks Aroha completed at the various data collection points.

### 6.8.2 Story Comprehension Results

Fig. 78 displays the findings of Aroha’s story comprehension task, completed in English.



*Figure 78.* Story Comprehension English – Aroha

In Chapter Four, it was reported that Aroha had a high level of interest in reading, and this could offer some insight into her pre-intervention results in this task. She maintained her ability during the intervention, although no significant gains were made, despite the fact her mother used a more interactive reading style as a result of the intervention, as illustrated in Table 8 in Chapter Four. However, six months after the intervention ceased, Aroha scored 6 out of 6 on this assessment task. Fig. 79 illustrates the findings of the story comprehension task Aroha completed in te reo Māori.

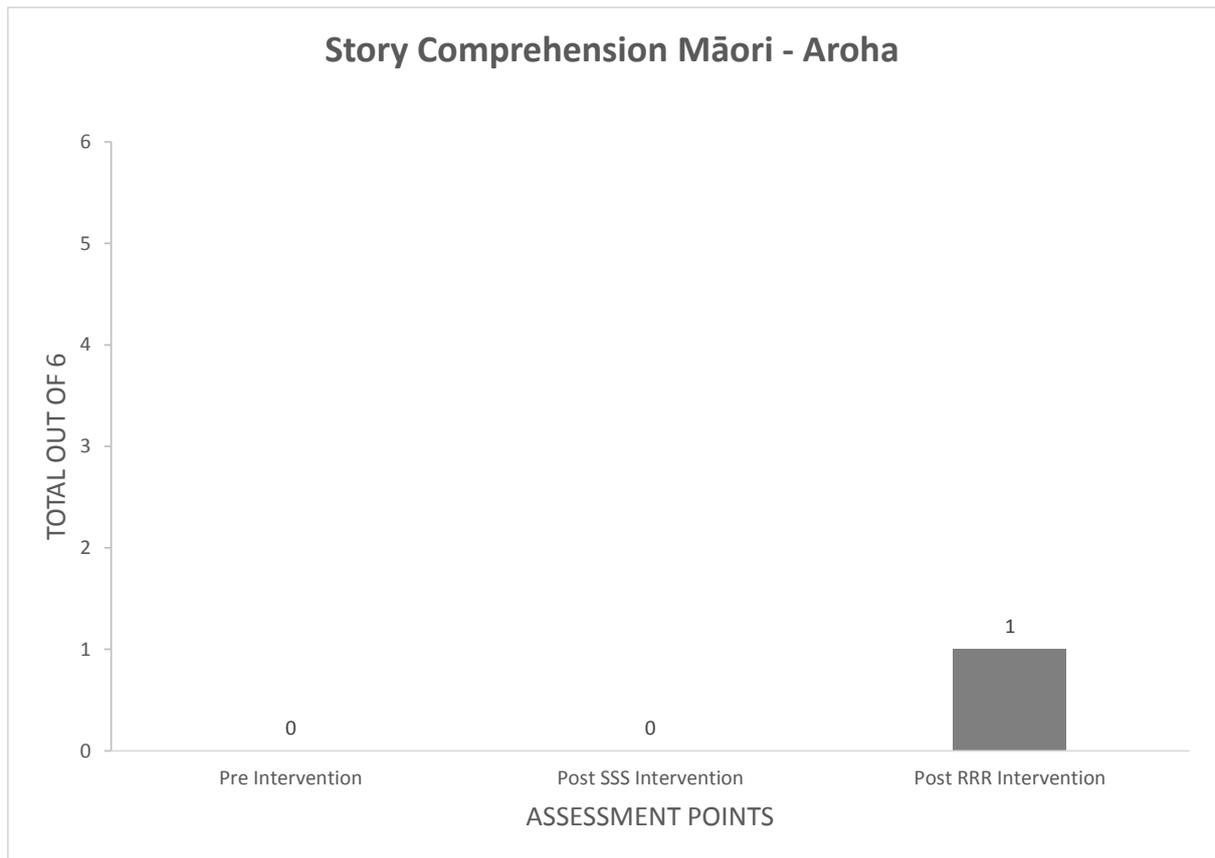


Figure 79. Story Comprehension Māori – Aroha

Aroha made a minor improvement post-intervention in her ability to answer key comprehension questions related to a story told in te reo Māori. She improved further six months after the intervention finished, and scored 3 out of 6 on this task. The final portion of this section presents data related to the story retell conducted with Aroha in English.

### 6.8.3 Story Retell Results

Table 17 shows the results of Ana’s English story retell assessment task.

ACTIVITY	T1	T2	T3	T4
Total utterances	12	7	10	11
C&I utterances	9	7	10	9
MLUw	5.33	5.00	3.80	5.78
Total words	62	38	38	62
Different words	38	23	12	24

*Table 17. Story Retell Analysis – Aroha*

Aroha offered an oral language sample at T1 and T4, but at T2 and T3, the researcher recorded this task as abandoned. The figures depicted here at these data collection points relate to Aroha conversing about matters other than the story. Analysis of the results generated at T1 and T4 shows little marked improvement in Aroha’s oral language skills.

## **6.9 Summary**

This intention of this chapter was to offer some insight into the effectiveness of the intervention in generating positive shifts in the cognitive skills central to the children in this study experiencing early literacy success. Numerous sets of data were presented, which relate to aspects of oral language – specifically, the vocabulary knowledge of the children, their story comprehension skills, and their ability to retell a story in English. It was noted in the opening statements of this chapter that the level of proficiency of the children in te reo Māori has yet to develop to a stage where they are able to retell a story in te reo Māori.

Some analysis of the data sets presented in this chapter was conducted using the contextual understanding offered in Chapter Four of this work, which shed light on the home literacy environment and practices of the whānau participating in this research. However, like the findings presented in Chapters Four and Five of this work, the data sets presented in this chapter are analysed in depth in Chapter Seven of this thesis, using the various theoretical lenses constructed in Chapters Two and Three.

In keeping with the previous two chapters of this work, Chapter Six was separated into eight sections, with the results of each child included in a section of its own. Each section was divided into three parts. The first part presented the findings of the PNT, which each child completed pre-, mid-, and post-intervention, as well as at the final data collection round conducted six months after whānau had completed the intervention. The second portion of each section described the results of the story comprehension questions the children were asked during the story retell tasks, in which the researcher used a book in English and te reo Māori, respectively, and the final portion of each section presented the findings of the oral language samples collected as part of the story retell tasks.

This chapter contributes to the overall thesis by offering some insight into aspects of the oral language skills of each child participating in this research. The presentation of the data sets allowed the crossover design of the study to reveal if the shared book reading and activities each whānau completed in the RRR part of the intervention in particular, generated any positive shifts in the oral language proficiency of each child. The data sets of every child indicated that elements of the RRR portion of the intervention had a substantial effect on their oral language skills, in particular the activities in the intervention that focused on teaching children new words. Those children who completed the RRR portion of the intervention first were able to name the new words in the PNT at the mid-intervention data collection phase, while those children who were involved in the SSS part of the intervention first were still unable to identify the words in this task.

Improvements in the ability of the children to comprehend a story, particularly in English, are evident in each section, with these gains often correlating with changes to the level of interaction in the mothers' reading style described in Chapter Four. For each child, English is their dominant language, and the combination of that fact, plus the revelations that numerous whānau struggled with some of the te reo Māori book and activities included in the intervention, explain the reason for the comparatively lower improvements in the ability of each child to answer key comprehension questions about a story in te reo Māori.

It was noted in Chapter Three of this work that changes to children's oral language samples generally take longer to develop, and consequently be detected. Therefore, the analysis of the children's oral language samples generated by the story retell may not be indicative of the efficacy of the activities associated with the intervention in strengthening aspects of the children's oral language skills simply because the

intervention did not run long enough to allow substantial and sustained positive shifts to occur, and for the researcher to thus draw solid conclusions about the effectiveness of this aspect of the intervention. However, some children made substantial improvements in their ability to retell a story, which align with the data sets presented in Chapter Four, particularly those that depict positive changes to whānau reading styles as a result of the intervention.

In conclusion, this chapter plays a key role in shedding some light on the central research question asked in this work, specifically ‘What effect does a home-based literacy intervention have on the cognitive skills associated with children’s emerging literacy?’ where vocabulary knowledge, and the ability to comprehend and tell a story, are recognised as being critical skills key to children experiencing success in their early literacy development. The findings presented in this chapter, together with those illustrated in Chapters Four and Five of this work, offer a holistic and in-depth understanding of the emerging literacy skills of each child participating in this research, the home literacy environment and whānau literacy practices influencing the literacy development of each child, and the efficacy of the intervention in strengthening the cognitive skills and whānau literacy practices central to children’s foundational literacy skills. The following chapter presents a general discussion that views and interprets the results presented in Chapters Four, Five, and Six through the various conceptual and contextual lenses established in the opening chapters of this work.

## **CHAPTER SEVEN: GENERAL DISCUSSION**

The overarching purpose of this chapter is to draw together the numerous data sets presented in Chapters Four, Five, and Six, and to interpret these through the conceptual and contextual lenses established in Chapters Two and Three of this thesis, with the intention of generating analysis that produces some responses to the key research question asked in this study, that is: ‘What effect does a home-based literacy intervention have on the cognitive skills associated with children’s emerging literacy?’ It was established earlier on in this work that a secondary line of enquiry focuses on literacy practices in the home, in particular, the effect those practices have on the foundational literacy skills of the children participating in this research, and the influence of the intervention on whānau literacy practices. Furthermore, at this juncture it is important to emphasise that in the opening paragraph of this thesis, it was stated that this work did not involve a large cohort of anonymous participants nor has it relied solely on statistical analysis as a way to drawing meaning from the data. Rather, it combined quantitative and qualitative data sets gathered with eight unique individual participants and their whānau. These sets were viewed and interpreted through an ecological and cultural lens, which enabled the researcher to draw conclusions based on the quantitative trends and patterns that emerged.

This chapter addresses numerous key considerations of this work, which include the range of factors that were used to guide the development of the intervention, some commentary on the design of the research, and the efficacy of the intervention itself in creating positive shifts in the cognitive skills critical for early literacy success, specifically phonological awareness, and aspect of oral language. The first part of this chapter discusses the centrality of Māori oral traditions to the development of the intervention, and the relevance of the contextual insight into literacy in Māori communities to this study overall. The second portion of Chapter Seven offers some commentary on the models and theoretical frameworks used to inform the intervention. Finally, this chapter concludes by providing some answers to the overarching research question, as well as to the secondary consideration of this work.

## 7.1 Discussion and Analysis

A primary goal of this work is to seek inspiration and solutions from Te Ao Māori, which can be utilised in contemporary times to support Māori learners, in this instance, to develop strong foundational literacy skills critical to literacy success. In Chapter Two, it was established that Te Ao Māori was an entirely oral society, and that knowledge, customs, and history was transmitted from generation to generation orally (Mahuika, 2012; Royal, 2005). Oral traditions had implications not only for the storage and transmission of knowledge, but also governed how society was structured, and the roles people held (Moon, 2016). The whānau was the day-to-day social unit in traditional tribal society, and children were educated within the confines of their whānau. For this reason, the researcher decided to trial the intervention in the homes of whānau, as opposed to in an early childhood or primary school setting.

Numerous scholars offer observations relating to the education of children in pre-European tribal contexts, and note that children acquired knowledge primarily through singing songs, telling stories, mimicking elders, and playing games (Adds et al., 2011; Best, 1934; Buck, 1982; Mead, 2003; Metge, 1995). In addition to this, the past holds a central place in a general Māori worldview, and stories of creation, tribal ancestors, history, genealogy, and tribal landmarks were told frequently. The acquisition of genealogical knowledge also served the purpose of locating children within their world, and connecting them to their kin, both past and present. The aforementioned pedagogical approaches have resonance with the contemporary discourse relating to home literacy practices, where it is argued that singing songs, playing games, telling stories, and reminiscing about past events with children can assist with the development of oral language proficiency, and other cognitive skills, such as phonological awareness, which are necessary for early literacy success (Reese, 2013; Snow et al., 1998; Weigel et al., 2006). These activities, drawn from traditional Māori pedagogy, and supported by contemporary literature relating to literacy acquisition in preschool children, informed the development of the intervention, and are used in both the RRR and SSS components of the intervention. More specifically, activities whānau engaged with in the RRR part of the intervention include telling rich and interactive stories, having conversations about past events, and making connections with the world around them. During the SSS portion of the intervention, whānau played games, and sang songs with their children, which were designed to stimulate their phonological awareness skills. The efficacy of these

traditional Māori practices in strengthening the foundational literacy skills of the children participating in this study is discussed further on in this chapter.

While traditional tribal society was entirely oral in nature, it did not remain this way in perpetuity. When Pākehā settlers began to arrive in New Zealand in the early 19<sup>th</sup> century, they brought with them a multitude of new technologies, systems, forms of knowledge, and skills, one of which was literacy. Chapter One explored numerous understandings of the term 'literacy', some of which are drawn from a Māori worldview. It is important to recognise that pre-European tribal groups were not 'illiterate' but rather, in the context of Western interpretations of the term 'literacy' as it pertains to reading and writing, traditional tribal societies are best described as 'non-literate'. However, the researcher acknowledges Māori understandings of what literacy means in Te Ao Māori, which go beyond the notion of simply being able to read and write. Insight into the changes brought about by the arrival of literacy in New Zealand, and the swift and enthusiastic adoption of this skill by Māori communities (McKenzie, 1985), serves three main purposes in this study. Firstly, and most importantly, understanding the relationship of Māori communities with literacy supports one of the overarching aims of this work, specifically, to draw solutions from Te Ao Māori – in this case, from history in particular – to foster success in contemporary Māori communities. Highlighting the successful historical acquisition of literacy by Māori offers an alternative to the deficit discourse so often promulgated with regard to Māori learning and educational abilities, and strongly debunks the suggestion that literacy is not part of Māori history and cultural practices. Woven into the aim of seeking solutions from Te Ao Māori is the notion of self-determination, which, it has been established, is the central theme of this research. Secondly, generating some understanding of the interplay of an Indigenous community – in this case, Māori – with literacy is an innovative angle in a study exploring literacy, and offers a unique contribution to the body of knowledge in the field. And finally, consideration of Māori interactions with literacy demonstrates cognisance of history which is culturally relevant, and provides some contextual understanding that resonates with those participating in this study. This consideration is in alignment with the contentions put forward by Bronfenbrenner (1979) in his model of human development (see Fig. 1). More specifically, Bronfenbrenner argues that in the Macrosystem, giving attention to historical aspects, and the influence they may have on an individual, is vital. Indeed, one of the main objectives of this study is to draw from elements of Māori history with the specific

aim of influencing both the present and the future. In particular, the intention, encapsulated in the title of this thesis, is to restore historical Māori literacy narratives to create contemporary stories of success in literacy for Māori learners.

This discussion will now turn to the various models and theoretical frameworks that influenced the study overall, and guided the development of the intervention. It has been acknowledged that research exploring literacy with bilingual Māori children is largely uncharted territory (Harris & Kaur, 2012), and currently, there is comparatively little understanding about how literacy may emerge in preschool children exposed to both English and te reo Māori in their home, and at their early childhood centre. Therefore, the researcher was unable to draw from a corpus of work that had previously explored cognitive skills critical to early literacy success, such as phonological awareness and oral language proficiency, with bilingual Māori children, and turned, instead, to the rich body of research that has emerged from Western scholarship. However, assuming these findings would apply in the same way to bilingual Māori children would require a disregard for the cultural and linguistic features of the children and whānau participating in this research. Furthermore, making such assumptions would be to discount the theoretical contentions discussed in Chapter Three, where it was asserted that there is an inextricable link between cognitive functioning, and social and cultural context (Burr, 2003; Macfarlane, 2015; John-Steiner & Mahn, 1996; Vygotsky, 1978). Macfarlane (2015) contends that knowledge is created and embedded through frequent interactions between people in settings that are culturally-bound, and that these settings are relative to different social and cultural groups. John-Steiner and Mahn (1996) contribute to Macfarlane's (2015) contention with the suggestion that learning and development, which occur as a result of human activities that unfold in cultural contexts, are facilitated by language relative to that cultural group. Interestingly, they add that this learning and development can be better understood when consideration is also given to their historical advancement. This lends weight to the attention given to the historical interactions Māori communities had with literacy, and its position as a key factor in this research.

In addition to the theoretical assumptions put forward above, Bronfenbrenner's (1979) ecological systems theory maintains that human development is influenced by numerous external factors, which impact on an individual at personal, educational, community, or societal levels. In Chapter Three, Fig. 1 illustrates how Bronfenbrenner's theory applies to this case study, where the notion of culture

permeates each of the systems, right down to the individual. Bronfenbrenner lays out the argument as to why consideration of the significance of culture on an individual's development is important with his observation that "within any culture or subculture, settings of a given kind – such as homes, streets, or offices – tend to be very much alike, whereas between cultures they are distinctly different" (p. 4). Thus, given this research involves Māori children and whānau, consideration of culture, and the role it plays in human development and cognitive function, is crucial. In addition to this, it was imperative that a culturally-responsive literacy intervention was created, which was embedded with Māori cultural features that are relative to the cultural context of the children and whānau participating in this research. Therefore, the theoretical frameworks discussed in Chapter Three of this thesis serve an additional purpose, namely guiding the development of the intervention trialled in this work.

In order to establish a literacy intervention that was appropriate for use with Māori children and their whānau, the researcher applied He Awa Whiria model (see Fig. 2). Macfarlane et al. (2015) contend that it is culturally inappropriate to seek solutions to Indigenous challenges solely from the findings produced by Western research. Rather, they argue that drawing from both Indigenous and Western bodies of knowledge forms an approach, and generates solutions, which are more powerful than either knowledge stream is able to produce on its own. The premise for using this model is that it allowed the researcher to braid rigorous scientific research exploring the cognitive skills critical for early literacy success, with key elements of Māori history, pedagogy, and epistemology. In order to operationalise He Awa Whiria, the researcher applied Macfarlane and Reweti's (2011) CEF, the process of which was outlined in Chapter Three. Combining the CEF with He Awa Whiria resulted in a culturally-responsive literacy intervention, which was then able to be trialled with Māori children in a whānau setting.

Another key element of the theoretical contentions put forward by Vygotsky (1978), which was incorporated in the intervention, was his concept of the ZPD. Vygotsky contends that learning occurs through interactions in this zone, where the task the child is attempting to complete is neither so difficult that it is beyond the capabilities of the child, nor too easy, so that the child is neither interested nor stimulated. Brown et al. (1993), who developed and implemented numerous educational programmes based on Vygotsky's ZPD concept, suggest that 'active agents' within the ZPD can be inclusive of both adults and children, with various degrees of expertise, but it can

also include artefacts, such as books, which were key props used in the intervention. The intention of these agents is to facilitate learning for the less experienced party. The researcher applied the concept of the ZPD to the intervention via the sticker prompts created for the books, and the activities whānau were invited to participate in each week. With regard to the former, the sticker prompts got incrementally more difficult with each reading, and in order for the child to consolidate their current skills and move to the next level, it was necessary for the whānau member reading with the child to offer assistance which fostered an improvement in the child's abilities. Similarly, whānau engaging in the activities associated with both the RRR and SSS components of the intervention were required to scaffold their child in order for them to complete the various tasks, and consequently strengthen the cognitive skills necessary for early literacy success.

Palincsar et al. (1993) assert that the concept of reciprocal learning is a key feature of Vygotsky's work, and observe in various studies employing the ZPD that those parties engaging in this learning space each make significant and valuable contributions to the knowledge base of others participating. In other words, the child (or learner) can become the teacher, and the teacher (or more experienced of the two parties) can learn from the child. This approach closely aligns with the Māori concept of 'ako', which was explained in Chapter Three of this work. In short, in a linguistic sense, the word 'ako' means both 'to learn' and 'to teach', and this dual definition encapsulates the notion of reciprocal learning described above. Ako was exhibited throughout this study in the interactions between the researcher, the whānau, and the children, all of whom simultaneously held the role of both teacher and learner. Examples include, but are not limited to, the researcher learning from the children during the assessment tasks about their respective proficiency in each skill, and from the whānau through their evaluations of the intervention. Whānau acquired new skills from the researcher during the RRR and SSS whānau workshops, and, as a result of whānau scaffolding children's learning during the shared book reading and other activities in the intervention, the children strengthened their cognitive skills necessary for early literacy success.

Furthermore, ako was expressed in a unique way in this study, with numerous whānau reporting that, as a result of the intervention and their child engaging with books and activities using te reo Māori, they learnt words and phrases in te reo Māori, which they did not know previously. The phrase 'Reverse Language Transmission' (RLT) has been coined by the researcher to reflect the action of a child teaching an

adult (in this case, members of their whānau) words and phrases in a second language (in this instance, te reo Māori). For example, during the whānau interview with Atawhai's mother, she reported that, throughout the intervention, and as a result of the effort she made to engage Atawhai in the te reo Māori books and activities, Atawhai was often adopting the role of teacher in interactions with older generations in her whānau. Atawhai's mother describes an encounter she witnessed between Atawhai and her grandfather:

Atawhai was in the garden with Dad and was using Māori names for different things she could see. Some of the words I recognised from the books. Dad said 'oh what are you saying?' and she was telling him what that means or what she said.

Similarly, in their own home, Atawhai enjoys teaching her mother different words and phrases in te reo Māori, many of which she learnt as a result of the intervention. RLT is an excellent example of ako manifesting, where the more traditional notion of 'adult teaches, child learns' is replaced with a learning environment in which reciprocity of teaching and learning is a key feature. RLT may also have implications for strategies designed to revitalise te reo Māori, where the typical understanding of how languages are transferred – that is, from an older generation to a younger generation – is how languages survive. However, in the case of RLT, the transfer of a language is occurring in the opposite direction, from a younger generation to older members of a whānau. The revitalisation of te reo Māori is beyond the scope of this study; however, it is worth noting the potential value RLT may have in this field.

In Chapter One of this work, it was suggested that, despite being infused with the best of intentions, culturally inappropriate literacy interventions may inadvertently undermine Indigenous cultures, languages, and epistemologies (Bialostok & Whitman, 2006). Hornberger (1996) advocates for 'ground up' approaches to strategies designed to improve literacy outcomes for Indigenous learners, which are directed by Indigenous communities, and embedded in Indigenous epistemologies, languages, and pedagogical approaches. Such a strategy serves two purposes. Firstly, it ensures a culturally-responsive literacy intervention suitable for implementation with Indigenous communities – in the context of this research, Māori whānau and children – is produced. This was achieved in this study by drawing from particular theoretical frameworks, and implementing the numerous models mentioned in the preceding paragraphs. These include Bronfenbrenner's ecological systems theory, and his model of human development (see Fig. 1), Vygotsky's

sociocultural theory, and in particular, his concept of the ZPD, the Māori pedagogical theory of *ako*, the CEF, and the overarching He Awa Whiria model (see Fig. 2). Secondly, a literacy intervention grounded in Māori epistemology, inspired by Māori history, which is inclusive of Māori language and pedagogical approaches, and run by *whānau* employs a 'by Māori, for Māori' approach, and in doing so, contributes to Māori self-determination, both at the individual and community level.

The final part of this chapter explores the findings presented in Chapters Four, Five, and Six, and offers some answers to the overarching research question posed in this study, that is: 'What effect does a home-based literacy intervention have on the cognitive skills associated with children's emerging literacy?' In addition to this, some insight is offered concerning the secondary line of enquiry in this work, specifically, the influence of literacy practices in the home on children's literacy acquisition, and the effect of the intervention on those *whānau* practices. The main research question is addressed first.

In this study, two key cognitive skills crucial to children's foundational literacy development were explored. Those skills were phonological awareness, and aspects of oral language – specifically, the ability of a child to comprehend and retell a story, and the breadth of their vocabulary knowledge, both of which are generally accepted to be critical to children's literacy success (Bird et al., 1995; Champion et al., 2003; Gillon, 2018; Leyva et al., 2012; Liberman et al., 1989; Torgesen et al. 1994; Wells, 1986). Chapter Five presented several series of data relating to the phonological awareness assessment tasks children completed pre-, mid-, and post-intervention, as well as six months after the intervention had finished. Each child completed IPI tasks and SA tasks in both *te reo Māori* and English. Pre-intervention, three repeated measures of each assessment task occurred; mid-intervention, each child completed the assessment tasks twice; and post-intervention, the assessment measures were again administered three times each. At the six-month follow up data collection phase, each child completed the four assessments once. The convention of conducting the assessment tasks more than once is in accordance with single case design (Kazdin, 1982), and served two purposes. Firstly, by generating an average score at each data collection point, it allowed the researcher to gain an accurate indication of each child's skill level, eliminating to a large extent an element of chance in the children's responses distorting the findings. Secondly, it established a baseline (pre-intervention) score, against which subsequent results could be measured, thus revealing any shifts in the children's abilities as a result of the intervention.

Essentially, the average score generated at baseline established a control for each child. The findings were statistically validated using the two standard deviation band method (see Nourbakhsh & Ottenbacher, 1994). Results that sit beyond the band represent gains made that are statistically significantly different to pre-intervention findings, or in other words, are above chance, thus illustrating the child has grasped the skill in question. The following conclusions can be drawn from the series of data presented in Chapter Five.

A significant finding revealed by these data sets was highlighted by the crossover design of the study. In considering the key research question, the results of the phonological awareness assessment tasks demonstrate clearly that the intervention created positive shifts, significantly above chance, in the cognitive skills of the children participating in this study. More particularly, the shared book reading and activities associated with the SSS portion of the intervention strengthened the phonological awareness abilities of each child. Atawhai, Kahu, Hine, and Aroha completed the SSS part of the intervention first. At the mid-intervention data collection point (that is, following the completion of the SSS shared book reading and activities), Kahu scored significantly above chance in every phonological awareness assessment, and maintained these improvements post-intervention. Atawhai made gains significantly above chance in three of the four assessments, but, like other children participating in this research, struggled to detect the syllables in one-syllable words, and therefore, did not improve at a level beyond chance in the English SA task, although her ability to complete this task pre-intervention was relatively well-developed.

Hine generally scored highly in each of the phonological awareness assessment tasks pre-intervention, and therefore, despite improving in these tasks to a level where she was able to maintain a consistent score, the majority of her results revealed these gains were not of significance. However, after completing the SSS portion of the intervention, Hine scored significantly above chance in the SA task in te reo Māori, initially having struggled to identify the syllables in one-syllable words but managing to do so at the mid-intervention data collection phase. Denton et al. (2000) contend that phonological awareness skills acquired in one language can be applied to other languages. Hine was exposed to high levels of te reo Māori in the home, and this, coupled with a strong interest in reading in both English and te reo Māori, which occurred frequently, offers some insight into Hine's results.

Interestingly, following the completion of the SSS component of the intervention, Aroha scored significantly above chance in the SA tasks in both English and te reo Māori, but at the mid-intervention data collection point, gains that were significantly above chance in both IPI tasks were not evident. However, post-intervention, after completing the RRR portion of the intervention, Aroha scored significantly above chance in both IPI tasks. Champion et al. (2003) contend that as elements of oral language develop, in particular, vocabulary knowledge, there is an increased need to identify differences between various words, which demands children employ phonological awareness knowledge. Therefore, it is possible that, as aspects of Aroha's oral language proficiency expanded due to the RRR shared book reading and activities, her phonological awareness skills were also stimulated. This suggestion is supported by other scholarship, where the findings of numerous studies indicate that shared book reading, and verbal interactions with children, which include reminiscing about past events, asking open-ended questions, singing songs, reciting rhymes, telling stories, and playing games, can foster phonological awareness skills (Burgess, 1997; Justice & Pence, 2005; Kusleika, 2014; Reese, 2013; Reese et al., 2010; Salmon & Reese, 2016; Weigel et al., 2005; Wells, 1986).

Moana, Ana, Tama, and Tia completed the RRR portion of the intervention first, and in almost every instance, their results on each task at the mid-intervention data collection point remained insignificant. In saying that, it is worth highlighting that Moana scored significantly above chance in the IPI Māori task mid-intervention, having only completed the RRR component of the intervention. Like Aroha's results described in the preceding paragraph, it is possible that the RRR shared book reading activities helped to foster skills in phonological awareness. However, continued growth occurred after Moana completed the SSS portion of the intervention, which suggests the shared book reading and activities associated with this part of the intervention were more effective in creating positive shifts in the phonological awareness abilities of the children than the RRR part of the intervention was. Additionally, Moana's improvements in the IPI task in te reo Māori rather than English were likely supported by the substantial effort her whānau made to engage with the books and activities in te reo Māori.

With regard to the results of all of the children in this cohort, post-intervention, that is, after completing the SSS part of the intervention, Tama and Tia scored significantly above chance in each of the four assessments, and Moana made gains significantly above chance in the SA task in te reo Māori but not in English. Like

Atawhai and Hine, she struggled to detect the number of syllables in one-syllable words. Harris (2007) suggests that the orthographic structure of te reo Māori makes it difficult for children exposed to te reo Māori to segment one-syllable words, arguing that the reliance on vowel sounds in te reo Māori means the children are likely to separate a one-syllable word as CV-C or C-VC<sup>36</sup>. Pre-, mid-, and post-intervention, the vast majority of the children clapped two syllables for each one-syllable word, alternating between the CV-C<sup>37</sup> or C-VC<sup>38</sup> patterns mentioned above. However, six months after the intervention ceased, every child was able to identify the correct number of syllables in one-syllable words, with the exception of Atawhai and Ana. However, both Atawhai and Ana were able to detect one syllable in the English words but not the te reo Māori words. It is possible that Harris' contention has some merit, and that the orthographic structure of te reo Māori affects the ability of children exposed to this language to separate one-syllable words in the same way they would English words. However, based on evidence that has emerged in this study, what is more likely is that the ability to detect one syllable in words that consist of one syllable is a skill that is refined with age. Once the children were five years old, the majority of them could complete this task with both English and te reo Māori test items.

The only child in this cohort who did not make gains significantly above chance was Ana. Her whānau had comparatively low levels of engagement in the intervention, but, when conducting the various rounds of assessment with Ana, the researcher observed that Ana very quickly determined what was being asked of her, particularly in the IPI assessments, and was able to respond with the correct answer in most instances. The engagement her whānau did have in the intervention occurred in the first few weeks, which is reflected in the gains Ana made at the mid-intervention data collection point. However, in the case of the SA tasks in particular, her skills plateaued, and she did not improve beyond the gains made mid-intervention. These results indicate that the intervention was effective in creating positive shifts in the children's phonological awareness skills, particularly the shared book reading and activities in the SSS part of the intervention. Elements of Ana's results act as a control in this study, especially when they are viewed through the data sets provided in Chapter Four concerning the engagement her whānau had with the intervention.

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<sup>36</sup> Where 'C' stands for 'consonant', and 'V' stands for 'vowel'

<sup>37</sup> For example, 'be-lī' (see Appendix 13)

<sup>38</sup> For example, 'k-ai' (see Appendix 14)

With regard to the overall findings presented on each child in Chapter Five, there is little difference between their results in English and te reo Māori mid- and post-intervention, as well as six months after the intervention finished. Any differences that existed pre-intervention are indicative of variations in the level of exposure to each language in the home prior to the intervention commencing. Atawhai and Moana's IPI English and te reo Māori results, as depicted in Figs. 24 and 25, and 36 and 37 respectively, both illustrate substantial differences in their ability to detect the initial phoneme in English words compared to te reo Māori words. Both Moana and Atawhai had comparatively little exposure to te reo Māori pre-intervention, but their whānau engaged significantly with the te reo Māori books and activities during both the RRR and SSS components of the intervention. This effort resulted in considerable gains mid- and post-intervention in their ability to identify the first sound in te reo Māori words, suggesting that increased exposure to a language may foster the transfer of phonological awareness skills from a more familiar language to one heard less frequently.

However, the vast majority of the findings in the phonological awareness assessment tasks support the contentions put forward by Denton et al. (2000), who argue that phonological awareness skills in one language can be transferred to another language. Further to this, observations that emerged from a study by Royer and Carlo (1991) indicate that children's reading performance in English was highly correlated with their ability in Spanish. The results depicted in Chapter Five show very similar trends for each child, where their results in the IPI English tasks closely followed their results in the IPI Māori tasks. Likewise, their ability to identify syllables in English words was generally mirrored in the te reo Māori assessment task. Harris (2007) suggests that phonological awareness in te reo Māori is not a strong predictor of literacy success like phonological awareness skills in English are, and that phonological awareness is not as crucial to early literacy success in te reo Māori as it is in English. However, the findings put forward in this study correlate with the assertion made by Royer and Carlo (1991), who argue similar trends were apparent when they compared children's English and Spanish reading performances. It was noted in Chapter Two of this thesis that there is a scarcity of research on phonological awareness as it relates to te reo Māori. Therefore, the researcher is deducing, based on the evidence generated by Royer and Carlo's study exploring phonological awareness in Spanish, which, like te reo Māori, has a regular orthography, that phonological awareness in te reo Māori is indeed a necessary skill for literacy

acquisition in te reo Māori, and that it may also be a strong predictor of children's success in literacy. This conclusion is based on the findings in this study that, like Royer and Carlo's results – where phonological awareness skills in Spanish were a strong predictor of subsequent reading performance – show a correlation with the phonological awareness skills the children possess in English with those they have in te reo Māori. In other words, the findings in this study followed the same pattern as those in Royer and Carlo's research, and therefore it is possible similar deductions may be made, and that, in fact, phonological awareness skills in te reo Māori are also a key predictor of literacy success.

Supporting this contention are numerous studies that maintain that Spanish-speaking children with strong phonological awareness skills generally experience literacy success (Bravo-Valdivieso, 1995; Carrillo, 1994; Denton et al., 2000; Durgunoglu et al., 1993). It would be worth following the literacy progress made by the children participating in this study, as they journey through formal schooling, in order to determine if the phonological awareness skills they acquired in te reo Māori as a result of the intervention were indeed an accurate predictor of later success in literacy, in either English or te reo Māori. This line of enquiry is beyond the scope of this work. However, there is a need for a longitudinal study investigating if phonological awareness in te reo Māori at a preschool level is a strong indicator of literacy success in later years. Moreover, in light of Ganschow and Sparks' (1995) observations that explicit, direct instruction in Spanish phonology, which, like te reo Māori, is orthographically regular, results in significant gains in English phonological awareness skills, a longitudinal study exploring the cross-language transfer of phonological awareness skills from te reo Māori to English could have considerable implications for the argument that te reo Māori ought to be a core subject in New Zealand primary schools. Conclusions about the cross-language transfer of phonological awareness skills from te reo Māori to English are unable to be drawn from the findings presented in this study, because the research was not designed to explore cross-language transfer in particular. However, it is worth highlighting the correlation between the phonological awareness skills the children displayed in English with those they possessed in te reo Māori, which were significant and consistent across the cohort of children.

In summary, the findings generated by the IPI and SA tasks in both English and te reo Māori, which the children completed repeat measures of at the various data collection phases, indicate conclusively that the intervention fostered significant

growth in the phonological awareness skills of virtually every child participating in this research. While it is possible the shared book reading and activities associated with the RRR component of the intervention played a part in strengthening the children's phonological awareness abilities, it is irrefutable that the more focused and targeted SSS shared book reading and activities generated positive shifts in the children's ability to identify the first phoneme, and to detect the number of syllables in English and te reo Māori words. The findings in the English assessment tasks closely mirrored those produced by the tasks using te reo Māori words. The researcher contends that phonological awareness skills in one language can be transferred to another language, and that the more exposure a child has to a less familiar language, the easier it may be to apply those skills created by the more frequently heard language to a language heard less often. As a result of increased exposure to a less familiar language, the child's phonological awareness skills in that language are likely to improve, particularly if they have strong phonological awareness abilities in their dominant language. In closing, the research question explored the effect of a home-based literacy intervention on the cognitive skills (in this instance, phonological awareness) associated with children's emerging literacy, and the findings overwhelmingly indicate that the SSS portion of the intervention in particular, had a significant effect on the phonological awareness skills of the children participating in this research. The crossover design of the study, and elements of Ana's phonological awareness assessment results, together with insight into the engagement of her whānau with the intervention, provides a control in this study, which strengthens the rigour of the findings, and consolidates the conclusions drawn by the researcher.

It was noted in the introductory paragraphs of this chapter that the second cognitive skill explored in this study, which, like phonological awareness, is generally accepted to be critical to children's literacy success, is aspects of oral language – specifically, the ability of a child to comprehend and retell a story, and the breadth of their vocabulary knowledge. Chapter Six presented several series of data on various assessments related to the aforementioned aspects of oral language. Like the tasks the children completed to measure their phonological awareness abilities, the oral language assessments were undertaken pre-, mid-, and post-intervention, as well as six months after the intervention finished. Each child completed the PNT, two story comprehension tasks, where one book was in English and one was in te reo Māori, and a story retell using the English and te reo Māori book, respectively. However,

unlike the repeated measures at each data collection point conducted with the phonological awareness assessments, the tasks the children completed, which related to aspects of their oral language skills, were only carried out once at each data collection point. It was noted in Chapter Six of this work that, while the children understood the story told in te reo Māori, their proficiency in this language had not developed to a level where they were able to retell the story in te reo Māori. Instead, each child responded to the comprehension questions, and retold the story in English. Therefore, the researcher was not able to present data relating to the story retell assessment that the children completed in te reo Māori.

It was also mentioned in previous chapters that shifts in unconstrained skills in oral language, including vocabulary knowledge, and the ability to comprehend and tell a story, which are created by an intervention, may take longer to emerge than changes to constrained skills, such as phonological awareness. Therefore, the analysis of the children's oral language samples generated by the story retell task, and presented in Chapter Six of this work, may not be indicative of the efficacy of the activities associated with the intervention in strengthening aspects of the children's oral language skills. The intervention ran for a total of 12 weeks, with the RRR component of the intervention, which focused more specifically on oral language, running for six weeks. This may not have been long enough to generate and reveal shifts, and, in turn, to draw solid conclusions about the effectiveness of the RRR portion of the intervention in strengthening this particular aspect of children's oral language skills. Further to this, in some instances, children were reluctant to retell the story, and some attempts to generate a recording of the story retell had to be abandoned by the researcher. However, the majority of the data sets presented in Chapter Six indicate that the RRR portion of the intervention, and possibly the SSS component also, generated positive shifts in the elements of the children's oral language described above – specifically, increasing their vocabulary knowledge, strengthening their ability to comprehend a story, and in some instances, improving their story retell skills.

Oral language plays a key role in children's emerging literacy because, once a child has mastered basic encoding and decoding skills, which are acquired through applying phonological awareness abilities, skills in oral language – in particular vocabulary knowledge – help a child to determine if a word makes logical or grammatical sense in a text (Gillon, 2018). Moreover, children with larger vocabularies tend to learn new words with relative ease compared to children with

smaller vocabularies, and the larger a child's vocabulary is, the greater the likelihood is that they will be able to determine if a word is semantically correct. Essentially, vocabulary knowledge helps a child to draw meaning from a word, and thus comprehend what they are reading. Therefore, one of the key points of focus in the RRR portion of the intervention was on trialling a strategy to grow children's vocabulary knowledge. Pre-intervention, the children did not know any of the words in the PNT, with the exception of Tama and Moana, both of whom knew one word each. Tia, Ana, Moana, and Tama completed the RRR portion of the intervention first, which involved whānau using the sticker prompts in the books they received each week to explain the meanings of new words to their child. Like the findings produced by the SSS component of the intervention, where the crossover design further highlighted the effectiveness of the SSS shared book reading and activities in strengthening the phonological awareness skills of the children participating in the research, the design of the study has also illustrated the value of the targeted approach employed by the researcher to stimulate children's vocabulary knowledge. At the mid-intervention data collection point, Tama, Ana, Tia, and Moana each scored 3, 4, 3, and 4 out of 8 on this task, respectively.

Hine, Atawhai, Aroha, and Kahu completed the SSS component of the intervention first, and, at the mid-intervention data collection round, they all scored 0 out of 8 on this task. However, post-intervention – that is, after they had completed the RRR portion of the intervention – they scored 4, 5, 3, and 4 out of 8 on this task, respectively. These findings are solid evidence of the effectiveness of the intervention in strengthening the vocabulary knowledge of the children involved in the study. In other words, these findings reveal that aspects of the RRR intervention which focused on vocabulary, and, in particular, the way in which whānau facilitated the children understanding the meaning of new words, is an effective strategy which whānau can use to stimulate growth in children's vocabulary knowledge. On the first reading of the book, whānau highlighted a new word (a noun, in each instance), including pointing to the picture, and explained what it was. On the second reading, whānau pointed to the picture, asked their child to explain what the word meant, and on the third reading, whānau pointed to the illustration of the noun, and asked the child to name the object in question. The findings related to the PNT presented in Chapter Six show that during shared book reading, whānau pointing out the meanings of new words, and encouraging children to remember those words, is a valuable strategy that supports the growth of children's vocabulary knowledge. Robbins and Ehri

(1994) contend that a child's ability to understand and remember the meanings of new words depends strongly on how well developed a child's vocabulary already is. Therefore, it is possible that the home literacy environment of each child participating in this study contributed to their ability to retain the new words included in the PNT. Furthermore, Aroha, Tama, and Moana continued to grow their vocabulary after they had completed the RRR portion of the intervention, and were each able to identify the meanings of words in the PNT either after they had completed the SSS portion of the intervention, or six months after the intervention finished. This finding supports the cumulative nature of vocabulary knowledge put forward by Robbins and Ehri, where the larger a child's vocabulary is, the easier it is for that child to learn new words.

The strategy for teaching children new words, which was tested in the intervention by the PNT assessment, may also have contributed to the children's phonological awareness abilities. Numerous scholars argue there is an interdependent relationship between phonological awareness and aspects of oral language, in this case, vocabulary knowledge, insofar as that children who have larger vocabularies tend to have better phonological awareness skills (Bowey, 2001; Champion et al., 2003; Gathercole et al., 1999; Leyva et al., 2012; Wise et al., 2007). Champion et al. (2003) contend that as a child's vocabulary expands, there is a growing need to identify differences between words that sound similar. This leads to increasingly segmented lexical representation, which demands children employ their skills in phonological awareness. Therefore, by whānau employing the strategy trialled in this research, where the findings categorically show that the way in which whānau were teaching the children the meanings of new words stimulated growth in the vocabulary knowledge of each child, it can be argued that whānau are also supporting the development of their child's phonological awareness skills.

In addition to trialling a strategy designed to stimulate children's vocabulary knowledge, the researcher also collected data on the children's story comprehension abilities. Each child performed significantly better in the comprehension assessment related to the English story, thus confirming that English is the dominant language for all of the children. Furthermore, each child answered the comprehension questions about the te reo Māori story in English, but the researcher included these results because, despite the answers being given in a different language to the language the children heard the story in, their responses do indicate comprehension of the story. The data sets generated by the story comprehension task using the

English book reveal that each child improved from pre-intervention to post-intervention in their ability to answer key comprehension questions related to the story. A number of studies note the pivotal role whānau literacy practices can play in stimulating aspects of children's oral language skills, including their ability to comprehend a story (Burns et al., 1999; Bus, 2001; Dickinson & Smith, 1994; Justice & Pence, 2005; Neuman et al., 2008; Reese, 2013; Reese et al., 2010; Salmon & Reese, 2016; Scarborough & Dobrich, 1994; Weitzman & Greenberg, 2002). Such practices include asking open-ended questions during conversations, reminiscing about past events, making connections during shared book reading with the child's world, and offering additional information to what a child says. Each of these strategies was utilised in the intervention, and the results from the English story comprehension tasks indicate they are valuable strategies in improving children's oral language skills. Further to this, Atawhai, Moana, and Aroha performed well in the English story comprehension assessment pre-intervention, scoring 2, 3, and 3 out of 6, respectively. Interestingly, their score is correlated with a reasonably high score in the IPI English and SA English tasks conducted pre-intervention. This supports the contention put forward by numerous scholars that there is an interdependent relationship between phonological awareness and aspects of oral language. Additionally, Moana's and Atawhai's whānau made a significant effort to engage with the te reo Māori shared book reading and activities, and both Moana and Atawhai made consistent improvements in their ability to answer comprehension questions about the te reo Māori story compared with the other children participating in the study.

The final aspect of oral language, which the researcher assessed, was the ability of the children to retell a story. The recordings generated by this assessment task provided an oral language sample, which the researcher was able to analyse in order to gain some insight into the skills of each child. The data sets presented in the preceding chapter related to this assessment task, however, reveal few trends from which solid conclusions are able to be drawn. This finding supports the contention that skills in aspects of oral language may take longer to respond to an intervention, and thus for shifts to emerge. In saying that, some points are worth noting. Atawhai and Moana both had significant and continued growth in the various aspects of their oral language analysed by the researcher, and these changes are consistent with the level of engagement their whānau had during the intervention. The findings from Tia's and Hine's story retell assessment show they had some steady growth, while

Aroha's and Kahu's skills remained relatively the same at each data collection point, despite both Aroha's and Kahu's whānau engaging consistently throughout the intervention. Therefore, Atawhai's and Moana's results, and the suggestion that these were influenced by the engagement their respective whānau had during the intervention, are refuted by Aroha's and Kahu's findings, where their whānau each engaged well during the intervention, yet this did not translate into substantial improvements in their ability to complete the English story retell assessment task. Ana's results show substantial growth from pre-intervention to mid-intervention, at which point she had completed the RRR portion of the intervention. It has been mentioned that her whānau engaged less frequently with the SSS portion of the intervention, and this is consistent with the findings presented in Chapter Six on Ana's story retell task, where post-intervention, she had not made any improvements to her mid-intervention score. Finally, the researcher was unable to procure a story retell from Tama pre-, mid-, and post-intervention, but six months after the intervention ceased he provided the best sample of the entire cohort of children at any data collection point. This assessment task at times proved difficult to engage the children in, and in a few instances, the researcher was forced to abandon the collection of an oral language sample. However, in general, each child presented with a reasonably high level of oral language proficiency pre-intervention, and this is indicative of the strength of the home literacy environments created by each of their whānau.

In summary, the data sets generated by the various tasks that assessed aspects of children's oral language abilities, presented in Chapter Six, provide some answers to the overarching research question, which is: 'What effect does a home-based literacy intervention have on the cognitive skills associated with children's emerging literacy?' The data sets revealed that the intervention, in particular, the RRR shared book reading and activities, had a largely positive effect on the oral language skills of the children participating in this study, where skills in oral language are widely recognised as critical to early literacy success. A number of scholars argue that whānau who employ strategies, such as using a variety of different words during conversations with their child, asking open-ended questions, explaining the meanings of new words, making connections between books and the child's world, and talking about the past, help to foster a wide range of abilities, including vocabulary knowledge, narrative development, and story comprehension skills (Dickinson & Tabors, 2001; Hart & Risley, 1995; Leyva et al., 2012; Reese, 2013; Pan

et al., 2005). The findings related to the PNT assessment completed by each child at the various data collection points reveal that the shared book reading and activities in the RRR portion of the intervention, which were designed to stimulate vocabulary knowledge by explaining the meanings of new words, were successful in achieving this objective. Similarly, the practices whānau engaged in at home, which were also mostly associated with the RRR component of the intervention, and included asking open-ended questions, talking about the past, and helping their child to connect a story to the world around them, generated positive shifts in the children's story comprehension skills in particular, with some changes evident in the ability of the children to retell a story in English. These findings support the contention put forward by numerous scholars that the quality of conversations whānau hold with their children, together with the frequency with which these conversations occur, support aspects of children's oral language development, and in turn, their emerging literacy.

In considering the findings put forward in both Chapters Five and Six, conclusive answers to the key research question are revealed. The overarching response to the research question is that the home-based literacy intervention trialled with whānau in this study had a substantial and sustained effect on the cognitive skills associated with the emerging literacy, specifically phonological awareness and aspects of oral language, of the four-year-old children participating in this research. Moreover, the positive shifts the intervention created in the children's cognitive skills were consistent across the cohort, and the trends evident in the results of each child for the English and te reo Māori phonological awareness assessments were largely the same. Differences in the performances of the children in the various oral language assessment tasks between their ability to complete the assessments in English compared with their skills in te reo Māori, are evidence of the dominance of the English language for each child. Data sets presented in Chapter Three, which served the purpose of introducing each child, indicate that, in every home, English is heard and spoken the vast majority of the time. Similarly, observations made in Nōku Te Ao revealed that the children are exposed to, and converse with one another, mostly in English. With the exception of two or three teaching staff, who attempt to hold conversations with the children in te reo Māori, the language is largely confined to instructional and ceremonial usage. However, numerous whānau made a substantial effort to engage with the te reo Māori books and activities in the intervention, and this resulted in improvements in the phonological awareness abilities and, to a lesser

extent, elements of the oral language skills of the children. These gains are also an indication of a transfer between languages of the aforementioned cognitive skills, and imply, like other studies have found, that, particularly phonological awareness abilities in one language can improve skills in another. In closing, the findings presented in this work show definitively that the intervention had a considerable and continued effect on the phonological awareness and oral language skills of the children participating in this study.

The final point of discussion in this chapter is the secondary line of enquiry explored in this work. More specifically, this study examined literacy practices in the home, in particular, the effect those practices had on the foundational literacy skills of the children participating in this research, and the influence of the intervention on whānau literacy practices. In both traditional and contemporary Māori society, whānau had, and continue to exert, considerable influence over the educational outcomes of their children (Adds et al., 2011; Macfarlane et al., 2014; Mead, 2003; Metge, 1976; Sharples, 2009). For this reason, in order to align with the social structures and practices of traditional Māori society, the intervention was designed to be trialled in a home environment as opposed to a school or early childhood setting. In pre-European tribal society, children acquired the knowledge they needed to participate as an active member of the community in which they lived through songs, chants, and storytelling (Buck, 1982). The researcher drew from these traditional pedagogical approaches to teaching and learning, and infused them in the intervention, where whānau sang songs, and used stories in a variety of ways, in order to strengthen the skills children need to experience literacy success. This approach by the researcher serves to ensure solutions are sought from within Māori cultural practices, which, in turn, contributes to the self-determination of Māori at the individual, whānau, and community level. Furthermore, the blending of Māori pedagogy and epistemology with Western contentions about literacy development gives life to the He Awa Whiria model, which functioned as an overarching framework guiding this research. The findings discussed in the preceding sections show that traditional Māori pedagogical approaches and practices created positive shifts in the cognitive skills critical to children's foundational literacy skills.

A number of scholars contend that whānau play a central role in children's emerging literacy (Cairney, 1995; Champion et al., 2003; Kusleika, 2014; Purcell-Gates, 1996; Reese, 2013; Weigel et al., 2005). While earlier research on literacy practices in the home tended to focus solely on shared book reading, more recent studies contend

that a variety of whānau factors can influence children's literacy development. For example, some scholars argue that levels of education and school experiences within a whānau can effect children's literacy acquisition (Christian et al., 1998; Duncan & Brooks-Gunn, 2000; Snow et al., 1991). This study considered these factors, and found the former to have no bearing on the emerging literacy of the children participating in this research. However, while the school experiences of whānau, particularly with regard to te reo Māori, did not have any significant influence on the children's early literacy, it was often a factor in whānau making the decision to enrol their child in a dual language centre. Essentially, the vast majority of whānau did not have the opportunity to learn te reo Māori while they were at school, and wanted to ensure their child did not miss out on learning the language in the same way they did. Therefore, this study found that whānau experiences at school affected the education of their child in a broad sense, as opposed to exercising a more targeted influence on the children's emerging literacy.

Weigel et al. (2006) conducted a study investigating the influence of mothers' literacy practices, beliefs, and experiences on children's emerging literacy. It was noted in Chapters Two and Three of this work that, despite the invitation to participate in this research going to whānau in general, in every instance, it was the mother who accepted the invitation, and engaged in the shared book reading and activities associated with the intervention. There was little difference in the interaction each mother had in this study, and in their literacy beliefs, practices, and experiences in general. With the exception of Ana's whānau, whose engagement in the intervention was strong in the first three weeks, before it ceased more or less entirely, every whānau – where in each instance it was the mother who reported to the researcher, and completed the shared book reading and activities the majority of the time – made a substantial effort to engage in the intervention, and this resulted in considerable and continued growth in the emerging literacy skills of the children participating in this research. These changes are demonstrated by the numerous series of data presented in Chapters Five and Six, and were fostered by whānau literacy practices and engagement in the intervention, the evidence of which was illustrated in Chapter Four. Therefore, it is concluded that the findings presented in this study corroborate those put forward by other scholars, and that, in essence, whānau – in particular mothers – can heavily influence the literacy development of their child.

In order to generate positive shifts in children's phonological awareness and oral language abilities, whānau participating in this study engaged in numerous activities

widely recognised as fostering the aforementioned skills critical to early literacy success. These activities included shared book reading, holding conversations with children that featured open-ended questions, reminiscing about the past, singing songs, reciting rhymes, telling stories, and playing games. Numerous scholars contend that these activities stimulate skills in elements of oral language, and phonological awareness (Burgess, 1997; Justice & Pence, 2005; Kusleika, 2014; Reese, 2013; Reese et al., 2010; Salmon & Reese, 2016; Weigel et al., 2005; Wells, 1986). Like the findings discussed in the preceding paragraph relating to the literacy practices of mothers, and whānau in general, the data sets generated in this study substantiate the contentions made by a number of scholars that the key literacy activities mentioned above can strengthen children's phonological awareness and oral language proficiency, and this is evidenced by the series of data presented in Chapters Five and Six of this work.

In summary, the secondary line of enquiry in this study, which explored the influence of whānau on children's emerging literacy revealed three key findings. Firstly, like other studies have suggested, whānau can have a strong influence on children's literacy development, where beliefs, practices, and personal experiences associated with literacy – and, as this study found, with education in general – can have an effect on the cognitive skills necessary for early literacy success, specifically, phonological awareness and elements of oral language. Secondly, certain literacy activities, which whānau can engage their children in within their home environment, can stimulate phonological awareness skills, as well as elements of children's oral language. Those activities include reading books, asking open-ended questions, talking about events that occurred in the past, singing songs, telling stories, playing games, reciting rhymes, and making connections within a child's world. The majority of these activities have resonance with Māori pedagogical practices, and with a general Māori worldview. And finally, an exploration into the role of whānau in stimulating cognitive skills associated with children's developing literacy shows that whānau are as important in contemporary times in supporting children's learning, as they were in the traditional era.

The second element of the investigation into whānau literacy practices was to examine how the intervention changed the home literacy environment of the children participating in this study. The data sets presented in Chapter Four offer some answers to this consideration, and reveal that, in the case of each whānau, the activities associated with both the RRR and SSS components of the intervention

resulted in positive shifts in literacy practices, particularly in the reading style employed by the mothers. Moreover, the crossover design utilised in this study reveals clearly the impact of each part of the intervention. For example, whānau who completed the RRR portion of the intervention first were more likely to refer to the pictures in books, or to ask questions during shared book reading, at the mid-intervention data collection point. Conversely, whānau who engaged with the SSS component of the intervention first pointed out sounds in words at a higher rate mid-intervention than the other whānau did. With the exception of Ana's mother, who preferred to solely read the text of the story, and whose reading style remained largely unchanged throughout the intervention, analysis of the patterns generated by the whānau reading sample data show the way in which every mother read to their child became more interactive as a result of the intervention. In addition to greater communication with their child during shared book reading, whānau employed targeted and focused strategies, which, in turn, stimulated the phonological awareness and oral language skills of their child. These techniques included pointing out the sounds in words, referring to the illustrations in the books, asking their child questions, and offering more comments during the story. Schaughency et al. (2014) contend a more interactive reading style helps to foster cognitive skills critical to early literary success, and the series of data presented in Chapters Five and Six, illustrating the positive shifts in both children's phonological awareness skills, and elements of their oral language proficiency, corroborate the argument put forward by Schaughency et al. Therefore, the intervention created positive shifts in the way in which mothers read with their children, which, in turn, helped to support the literacy development of the children participating in this study.

Whānau also reported a range of anecdotal evidence, which indicates positive changes to their home literacy environment, their literacy practices, and the children's literacy skills as a result of the intervention. For instance, the majority of whānau noticed their child's ability to recognise words that rhyme improved, and post-intervention, Tama's mother shared this example:

I was really impressed with him [Tama] last week when I read the word nokenoke [worm] he said out of the blue that sounds like mokemoke! [lonely] And he certainly would not have been thinking like that without your project.

Others identified their child was better able to detect sounds in words, particularly the first phoneme, and Moana's mother reported that Moana loves to play 'I Spy', a

game which fosters children's abilities to recognise the initial sound in words. Moana's mother also reported that, after participating in this study, she has actively incorporated the ideas from the sticker prompts used in the books into her daily reading with Moana. Kahu's mother observed he is more likely to ask the meaning of a new word, and during shared book reading, will frequently ask what is going to happen next in the story. She also reported an improvement in his speech and listening skills, and believes he is a more confident and engaged learner as a result of the intervention. Furthermore, post-intervention, most whānau indicated an increase in the frequency they engage in shared book reading in particular, and their enjoyment of this activity. Hine's mother observed that the more interactive she was when reading a story with Hine, the more Hine responded in the same way. Hine's whānau also have more interactive conversations with Hine, where they use open-ended questions – a technique many scholars contend supports the development of early literacy skills. Finally, every whānau reported a greater awareness of the importance of reading with their child, and have made a conscious effort to ensure this activity continues to occur in their home.

The questionnaire conducted pre- and post-intervention generated series of data, which often did not corroborate with the data produced by the whānau reading samples collected pre-, mid-, and post-intervention. The vast majority of the latter data sets showed substantial shifts in the reading style each mother used during shared book reading. However, when whānau were asked to self-report on changes to their reading style, many indicated a decrease in certain techniques, such as pointing out sounds in words, whereas the whānau reading samples showed whānau had increased the frequency with which they highlighted sounds in words. Such discrepancies may be common to data sets where research participants have been asked to report on their own behaviour, compared to those where an independent measure has been employed to assess a particular phenomenon. Therefore, the data sets produced by the pre- and post-intervention questionnaire indicate few conclusive trends. In some instances, post-intervention, whānau described an increase in their level of interaction during shared book reading, and this correlated with the findings of their whānau reading samples. However, at other times, whānau reported a decrease compared with pre-intervention responses in their interaction during shared book reading, and this did not align with the results of their whānau reading samples. It is contended the findings of the whānau reading samples are more rigorous, because they are comparatively free from bias. Furthermore, had

whānau been able to amend their pre-intervention responses in light of the insight they gained into their home literacy practices and reading styles during the intervention, some of the results may better reflect the changes to whānau literacy practices illustrated by the whānau reading samples, and the observations whānau made concerning their child, which they reported on in their evaluations of the intervention itself. However, the findings of the whānau reading samples, together with the anecdotal evidence provided by whānau, indicate that the intervention indeed created positive changes to the home literacy environments of the children participating in this study. Like the data sets presented in Chapters Five and Six, which were discussed earlier on in this chapter, the crossover design of the study revealed the positive shifts in whānau literacy practices, which were specifically created by the RRR or SSS component of the intervention, respectively. In conclusion, series of data related to the secondary line of enquiry in this study show conclusively that whānau literacy practices, and the home literacy environment in general, can influence children's early literacy development, and that, further to this, the intervention trialled in this research was effective in creating numerous changes to whānau literacy practices, and the home literacy environment of the children participating in this study.

## **7.2 Summary**

The primary intention of this chapter was to answer the key research question posed in this study, which is: 'What effect does a home-based literacy intervention have on the cognitive skills associated with children's emerging literacy?' By drawing together the various series of data presented in Chapters Four, Five, and Six, and interpreting these through the conceptual and contextual lenses established in Chapters Two and Three of this thesis, the researcher generated analysis that provided some responses to the overarching research question. In essence, the home-based literacy intervention trialled in this study had overwhelmingly positive effects on the cognitive skills associated with children's emerging literacy, with those skills being phonological awareness, and key elements of oral language. Furthermore, this chapter provided some insight into the secondary consideration of this work, which explored the influence of whānau on children's developing literacy, along with the effect of the intervention on whānau literacy practices. Again, the analysis generated in this chapter indicated that whānau have significant influence on children's emerging literacy, and that the intervention was effective in creating some positive

shifts in the home literacy environments and whānau literacy practices of the children participating in this study. In addition to these contentions, it is argued that whānau have as much influence on the learning outcomes of children in contemporary times as they did in traditional tribal societies.

This chapter also discussed numerous cultural factors that were used to guide the development of the intervention, particularly the centrality of Māori oral traditions to the intervention itself. In order to draw from Māori pedagogical approaches and practices, and in turn, contribute to the notion of self-determination in Indigenous communities, the researcher infused elements of Māori oral traditions into the intervention, in particular, the practice of transmitting knowledge by singing songs and telling stories. Further to this, is the cultural concept encapsulated by the whakataukī: 'Ko te kai a te rangatira he kōrero', which is best translated to 'Discussion is the food of chiefs'. This whakataukī shows the significance of discussion and conversations in Te Ao Māori, and it is this idea that is evident throughout the intervention, especially in the shared book reading and activities that whānau engaged in. In addition to imbuing the intervention with key Māori cultural concepts and practices, it was established in the earlier chapters of this work that a primary objective of this study is to offer an alternative to the deficit theorising and discourse, which is so often promulgated with regard to literacy for Māori children, and the educational outcomes of Māori learners in general. The exploration into the history of literacy within tribal groups in New Zealand overwhelmingly illustrates that literacy, that is, reading and writing, has long been a valued part of Māori society, and was a skill that was highly sought-after. Contrary to the suggestion that literacy is not part of Māori culture and society is the historical evidence put forward by the researcher, which strongly refutes the idea that literacy is neither a skill Māori are able to acquire, nor a skill Māori are concerned with. Historical precedent, established by ancestors, proves categorically that the opposite is the case. The researcher encourages a focus on these historical narratives, and suggests they may contribute to fostering contemporary stories of literacy success for Māori children.

This chapter also considered the various models that guided the development of the intervention, and the research in general. These models include Bronfenbrenner's ecological systems theory, and his model of human development; Vygotsky's sociocultural theory, and in particular, his concept of the ZPD; the Māori pedagogical theory of ako; the CEF; and the overarching He Awa Whiria model. By drawing from these models, the researcher co-created a culturally-responsive literacy intervention

suitable for implementation with Māori children and their whānau, which was grounded in Māori epistemology and pedagogy, and aligned to the substantial and rigorous body of research that has emerged from Western scholarship. The crossover design of the study allowed the efficacy of the shared book reading and activities associated with each component of the intervention to be revealed, and enhanced the scientific rigour of the research process, and the findings produced by the study. In order to align with a general Māori worldview, the researcher used a mixed methods approach, where qualitative data shed light on aspects of the home literacy environments of the children participating in this study, and quantitative sets reflected the effects of the intervention in creating positive shifts in the cognitive skills necessary for early literacy success. Further to this, such an approach is in keeping with the theoretical assumptions set forth by Vygotsky (1978) and Bronfenbrenner (1979), both of whom argue that human development and cognitive functioning do not occur in a vacuum, and that, consequently, there is a need to generate holistic insight and understanding of, in this instance, the emerging literacy of the children participating in this study. As a result of these critical theoretical and cultural factors, this research has produced holistic and multi-faceted insight into the manner in which foundational literacy skills develop in four-year-old Māori children, who are exposed to English and te reo Māori in their preschool years.

In closing, this penultimate chapter makes a critical and significant contribution to the thesis. Essentially, both the primary research question, together with the secondary consideration in this work, were answered. This chapter is the culmination of the numerous factors discussed in this work, which include series of data, lines of enquiry, and theoretical contentions put forward in the preceding six chapters of this thesis. The following and final chapter in this work concludes the thesis by offering a summary of each chapter, and cementing the research in the central theme, specifically, self-determination, as well as the overarching framework of human rights discussed in Chapter One. The subsequent chapter also explains how this thesis has made a unique contribution to the body of knowledge associated with literacy and Māori development, and suggests areas for further research based on what this thesis has illustrated.

## **CHAPTER EIGHT: CONCLUSION**

The primary goal of this research was to explore the efficacy of a home-based literacy intervention in advancing preschool children's foundational literacy skills, specifically phonological awareness, and aspects of oral language. In particular, this study measured children's ability to identify the first phoneme in English and te reo Māori words, as well as their aptitude in detecting the number of syllables in English and te reo Māori test items. These assessments, conducted pre-, mid-, and post-intervention, along with a follow up data collection round six months after the intervention ceased, offered insight into the phonological awareness skills of the children participating in this research. Similarly, the researcher collected data at the same data collection phases on the children's oral language proficiency by investigating the extent of their vocabulary knowledge, and their ability to comprehend and retell a story in both English and te reo Māori. The entire data sets were viewed and analysed through data collected on the whānau literacy practices, and the home literacy environments of the children participating in this study, as well as the theoretical contentions set forth in Chapters Two and Three of this work. This chapter concludes this thesis by summarising the content of the preceding chapters. Following this, the theoretical implications of this study are discussed, as well as the limitations of this work. This chapter ends by outlining the contributions this research makes to the field, together with suggestions for future research, which delves deeper into, or extends on the contentions made in this thesis.

The opening chapter in this thesis outlined the main intention of this study, which was to investigate the effect of a home-based literacy intervention on preschool children's cognitive skills critical to early literacy success. Numerous definitions of literacy were discussed, and this section highlighted the contemporary semantic elasticity of the term 'literacy' as well as the evolving nature of meanings associated with literacy. In addition to this, Indigenous understandings of literacy were explored, and while the interpretation of literacy in the context of this study relates to its associations with talking, listening, reading, and writing, the researcher acknowledged the existence of other understandings of literacy beyond the bounds of Western hegemony. This chapter also located the research in the framework of international human rights, where literacy is considered to be a human right critical to accessing other human rights associated with health and wellbeing, community engagement, cultural imperatives, and lifelong learning. Further to this, in studies

involving Māori communities and cultural contentions, it was necessary to also position the research in the context of the Treaty of Waitangi, and the provisions set forth by the founding document of New Zealand. Additionally, this research is part of A Better Start National Science Challenge, and the role the Challenge plays in contributing to raising literacy standards for all New Zealand children was recognised. This chapter laid out the justification for the study, specifically, that due to the findings of various studies indicating that inequalities in school entry literacy skills persist between Māori and Pākehā children, the researcher identified a need to explore literacy in a Māori context in an attempt to determine effective, culturally-responsive strategies, which contribute to enhancing early literacy development for Māori children. This chapter concluded by outlining the ethical considerations of this work, and constructing the overall architecture of the remainder of the thesis.

Chapter Two explored literature relating to key considerations in this research, and constructed a contextual and conceptual framework from which to establish the direction and focus of the study. Factors examined in this chapter, which have resonance with this work included phonological awareness, and various elements of oral language, as key predictors of literacy success; literacy practices in the home – in particular, the role of the mother in fostering skills in early literacy; bilingualism; Māori oral traditions and pedagogy; and historical interactions of iwi and hapū with literacy. This chapter established theoretical perspectives through which the numerous data sets collected in the study were viewed, analysed, and interpreted, and also put forward the overarching research question posed in this study, together with the secondary line of enquiry explored in this research. The various considerations explored in this chapter served different purposes in this study. Phonological awareness and elements of oral language, which are generally recognised as key cognitive skills critical to early literacy success, acted as the dependent variables in this study, alongside whānau literacy practices and the home literacy environments of the children participating in this research. The independent variable was the intervention trialled in this work, throughout which elements of Māori oral traditions and pedagogy, and bilingualism were infused. Essentially, this study explored the effect of the independent variable, that is, the intervention, on the dependent variables, namely the phonological awareness and oral language proficiency of the preschool children participating in this study, as well as the whānau literacy practices and home literacy environment of each child.

Chapter Three set out the ideological orientations and methodological approaches employed in this research. Two theoretical constructs were analysed, specifically sociocultural theory, and ecological systems theory, and the method in which they were applied to this case study was detailed. Using data sets generated by the interviews and pre-intervention questionnaire the researcher conducted with whānau, the four-year-old participants of the study were introduced, and details were specified of the development and implementation of the intervention trialled in this work. This chapter concluded by presenting the various phases of data collection, and an outline of the methods employed for analysing the numerous series of data generated at each stage. Essentially, where the previous chapter provided the rationale for the research questions, this chapter detailed the various approaches employed to generate sets of data, which would offer responses to the questions posed in this work.

Chapter Four presented the various data sets collected in the study, which related to whānau literacy practices in the home environment. More specifically, three particular series of data were discussed. Firstly, the findings of a questionnaire conducted pre- and post-intervention – the questions of which were centred on the home literacy practices of the participants in the study – were illustrated. Secondly, data sets pertaining to whānau engagement with the intervention, together with their evaluation of it, were offered, and finally, analysis of the whānau reading samples collected pre-, mid-, and post-intervention were presented. This chapter served three main functions. Firstly, it examined one of the major considerations of this study, that is, the influence of the home literacy environment on the emerging literacy of the children participating in this research. Secondly, it explored the effects of the intervention in creating shifts in home literacy practices, and finally, it established a contextual lens through which to view and interpret the data sets presented in Chapters Five and Six of this work. Therefore, when considered alongside the findings related to other dimensions explored in this work, the data sets presented in this chapter provide insights into key influences on the emerging literacy skills of the children who participated in the study. The data sets presented in Chapter Four revealed that whānau literacy practices have a considerable influence on children's emerging literacy, and that the intervention was effective in creating positive changes to the home literacy environment of the children participating in this research.

Chapter Five presented the findings of the assessment tasks the children completed relating to phonological awareness, which is generally recognised as being one of two

key predictors of early literacy success. The findings of game-based assessment tasks, which the children completed pre-, mid-, and post-intervention, and six months after the intervention ceased, were examined, and the lens constructed in Chapter Four of this work was utilised in this chapter to generate some analysis of and insight into the phonological awareness data sets. The two standard deviation band method was used to statistically validate the findings of the assessments, where results which sat outside the band depicted in each graph were significantly above chance. This chapter contributed to answering the key research question posed in this thesis by shedding light on the efficacy of the intervention in generating significant shifts in the phonological awareness skills of the children participating in this research.

Chapter Six examined further key predictors of early literacy success, specifically various elements of oral language, such as vocabulary knowledge, and the ability of the children participating in this study to comprehend and retell a story. The contextual construct created in Chapter Four, and applied in the preceding chapter, was used to shed some light on data sets relating to the oral language skills of the children participating in this study. Together with data on phonological awareness, series of data relating to aspects of oral language were collected pre-, mid-, and post-intervention, and six months after the intervention finished. The major focus of this chapter, and the contribution it made to the thesis overall, was to determine the effectiveness of the intervention in creating positive shifts in elements of the oral language skills of the children participating in this research. The results presented in this chapter show that the intervention influenced aspects of the children's oral language skills, particularly their vocabulary knowledge, and story comprehension abilities.

Chapter Seven analysed the findings of Chapters Four, Five, and Six through the theoretical perspectives outlined in Chapters Two and Three, and presented a discussion on the efficacy of the intervention in strengthening the cognitive skills associated with the early literacy of the children participating in this research. Essentially, this chapter offered answers to the key research question: 'What effect does a home-based literacy intervention have on the cognitive skills associated with children's emerging literacy?' as well as provided insight into the secondary line of enquiry explored in this work, which was the influence of whānau literacy practices on children's emerging literacy, and the effect of the intervention in creating positive changes to the home literacy environment. This chapter put forward numerous

contentions, derived from both qualitative and quantitative data, which support the argument that the intervention had a considerable effect on both the cognitive skills associated with children's literacy development, and the home literacy environments of the children participating in this research. In addition to this, it was asserted that whānau have a substantial influence on children's literacy acquisition. This chapter also discussed the various elements which guided both the development of the intervention, and the study in general. These included the theories and models applied in this work, such as Bronfenbrenner's ecological systems theory, and his model of human development; Vygotsky's sociocultural theory, and in particular, his concept of the ZPD; the Māori pedagogical theory of ako; the CEF; and the overarching He Awa Whiria model. Finally, Chapter Seven also illustrated the ways in which elements of Māori oral traditions, pedagogical approaches, and history influenced the intervention, and the research overall.

This work has numerous theoretical and practical implications, and the former is addressed first; in particular, three main points are covered. Firstly, the way in which this thesis aligns with the current body of research in this field is explained. Secondly, the contribution this work makes to the existing theory is outlined, and finally, the platform constructed by this thesis from which future research in this area can be launched is discussed. The numerous series of data generated in this study aligned in a range of ways with the various theoretical considerations explored in this work. In Te Ao Māori, it is widely accepted that oral traditions played a key role in traditional tribal societies with regard to the storing and transmission of knowledge. The cultural practices of singing songs and telling stories were two pedagogical approaches employed in traditional times to teach children the knowledge they needed to function in the community to which they belonged. The findings of this research support this contention, and indicate that using songs and storytelling remain valuable methods for teaching children, in this instance, skills critical to early literacy success.

Further to this, in Chapter Two, it was noted that in Te Ao Māori, children received their early education in a whānau setting, and that whānau strongly influenced children's learning outcomes, both in traditional and contemporary eras. The series of data generated in this study, particularly those sets presented in Chapter Four of this thesis, indicate that whānau affected the phonological awareness and oral language skills of the children, and this aligns with the theoretical assumptions set forth in Chapter Two with regard to the central role whānau play in children's

learning. Analysis of the historical interplay of Māori communities with literacy revealed that Māori swiftly and exuberantly embraced this new skill, and this impacted on Māori society in numerous ways. Mostly, this exploration served to offer an alternative the deficit discourse often associated with Māori learning and education, and instead, to highlight narratives of success in Māori communities. However, the findings generated in this study show that contemporary success in literacy for Māori children, which is fostered by whānau, is possible, is to be expected, and needs to be supported by culturally-responsive literacy interventions.

It is generally accepted among scholars in the field of literacy research that phonological awareness in English, together with aspects of oral language, are key factors critical to early literacy success, and that whānau literacy practices in the home environment can strongly influence children's proficiency in these skills. The findings of this study corroborate this argument, and also reveal that the shared book reading and activities associated with the intervention, which were inspired by both Māori pedagogical practices and Western imperatives regarding literacy development, served to create positive changes to the home literacy environment of the children participating in this research, which in turn, influenced the children's emerging literacy skills.

The intervention, and the research in general, also drew from theoretical assumptions put forward by Vygotsky (1978) and Bronfenbrenner (1979). A particular feature of Vygotsky's theory is the ZPD, which is the space in which Vygotsky contends learning occurs. The researcher employed this concept in the shared book reading and activities whānau participated in, and found, like Vygotsky suggests, that the scaffolding of children's learning is a useful strategy to enhance children's knowledge and skills, in this case, those associated with their emerging literacy. Further to this, Vygotsky and Bronfenbrenner both claim that culture and social settings influence human development, and the findings generated in this study align with their contentions. The arguments set forth in the preceding paragraphs illustrate the home environment of each child – or, in other words, the social setting, which includes cultural concepts and linguistic practices – strongly influenced each child and their whānau. Further to this, Bronfenbrenner maintains that historical factors can affect human development, and this was evident in whānau with regard to their experiences with te reo Māori. During the interviews conducted with whānau, it was revealed that each mother did not have the opportunity to learn te reo Māori during their school years. This factor played a key

role in influencing the decisions every mother made concerning the education of their child, where it was important for their child to learn the language they feel they missed out on.

It was acknowledged in Chapter Two of this work that there is a scarcity of research concerning the relationship of phonological awareness and te reo Māori. However, the researcher drew from findings produced by studies exploring phonological awareness and Spanish, which, like te reo Māori, is an orthographically regular language. The findings of these studies, and the correlations with the results in this research, were discussed in the preceding chapter, and are evidence of further alignments between the body of research in this field, and this thesis. However, it was also noted in Chapter Seven that Harris (2007) suggests that the orthographic structure of te reo Māori means it is difficult for children exposed to te reo Māori to segment one-syllable words. However, the findings of this study indicate otherwise, and instead it is argued that the ability to detect one syllable in words that consist of one syllable is a skill that develops with age. Therefore, this study has modified and enhanced elements of our theoretical understanding concerning the relationship between te reo Māori and phonological awareness.

Indeed, this work makes a significance contribution to the existing theory, and also advances numerous aspects of it. An exploration of various aspects of the current body of scholarship relating to key factors in this study enabled the case study itself to unfold. In fact, a symbiotic relationship between the theory and this research was born, whereby a consequence of examining the existing theory was the emergence of this case study, and the production of this case study advances our present theoretical understanding. In order to progress the theory, the researcher employed an Indigenous approach to the case study, which included generating a holistic and nuanced understanding of literacy development in Māori preschool children, who are exposed to both English and te reo Māori in their early childhood years. Drawing from the He Awa Whiria model, the researcher advanced the application of this model in a conceptual sense by braiding knowledge that emerged from both Western and Māori streams, and applying this in a field, in which the model had not previously been utilised. Practical advancements of the model were made through the creation and implementation of the culturally-responsive literacy intervention trialled in this work.

Essentially, the infusion of key cultural concepts and practices throughout the study resulted in the production of a unique model of analysis, which is of immense value

in both theoretical and practical terms. Firstly, with regard to the former, this case study wove numerous elements of the theory in a unique way, and in applying this theory to the case study, provided a critique to aspects of the theory, which served to advance contemporary understanding. Further to this, and in connection with the practical implications of the innovative model of analysis, the researcher used data collected during the course of the research as a lens through which to view and interpret other sets of data, thus generating multi-faceted insight into the numerous series of data produced in this work. Moreover, and arguably most importantly, the practical implications of this study are evident in the production of a culturally-responsive literacy intervention, which was successful in strengthening aspects of the foundational literacy skills of the children participating in the research. This is a unique and highly practical model, which could be applied in different settings in future studies, including with different age groups, in varying geographic locations, and with other Indigenous communities, who would be able to adapt the model to ensure it is relative to their cultural and linguistic context. Furthermore, there is the opportunity to conduct a longitudinal study exploring the question of phonological awareness in te reo Māori as a key predictor of literacy success. Such an investigation could also generate greater understanding of the influence of phonological awareness skills in te reo Māori on literacy development in English, and vice versa. A corollary to the historical experiences of te reo Māori is that, for many Māori, including the participants in this study, English is the dominant language. Therefore, future studies explicitly exploring phonological awareness in te reo Māori as a key predictor of literacy success in te reo Māori would be better suited to an immersion schooling environment where it is likely the children have higher levels of proficiency in the language.

Future trials of the intervention would provide the opportunity to ameliorate elements of the shared book reading and activities that the intervention was comprised of, as well as to refine some of the limitations of the wider study. Firstly, it was challenging to source 12 children's books in te reo Māori, which were suitable for use in the intervention. Some whānau reported that two te reo Māori books in particular, were difficult to read due to the complex language used in the story, and the length of the books. Therefore, the researcher recognises that not every book lent itself to the aims of the shared book reading tasks, namely, to point out the sounds in words, and to act as a prompt to stimulate quality conversations with the children. The dominance of the English language for every whānau and child participating in

this study meant it was difficult to make direct comparisons between the results generated by the assessment tasks in each language. Additionally, the ability of the researcher to gain in-depth understanding of the children's literacy skills in te reo Māori was constrained by the lower levels of proficiency of the children in this language. However, a longitudinal study following children from preschool age through to an age when they are able to read in te reo Māori would offer greater insight into their literacy skills in te reo Māori, as well as potentially determining if phonological awareness skills in te reo Māori are a key predictor of later success in literacy in te reo Māori, and possibly English.

Further to these limitations, and concerning the PNT, the researcher only included words from the books used in the RRR component of the intervention. Therefore, an opportunity exists to enhance current understanding of the way in which children grow their vocabulary through shared book reading. More specifically, the PNT found that whānau explicitly pointing out the meanings of new words stimulated children's vocabulary knowledge, but it may be that children are able to learn the meanings of new words simply by hearing them in a story, where the meaning of new words is derived from semantic understanding. The inclusion of words from the SSS portion of the intervention in the PNT, but where the sticker prompts designed to grow children's vocabulary knowledge are only included in the RRR shared book reading, would offer greater insight into effective techniques whānau can use during shared book reading which increase children's vocabulary knowledge. There is also an opportunity to trial the intervention with a larger cohort of children. However, this would require a modification to the design of the study. The repeated assessment measures at numerous data collection points required by single case design are labour- and time-intensive, and are best suited to a smaller cohort of participants.

Ultimately, and in conclusion, this study was more than simply an exploration of a topic. Instead, it generated change for every whānau and child participating in this research. It offers a strong counter to the deficit discourse relating to Māori learners, and proposes a response in which whānau are included as part of the solution rather than perceived to be contributors to the problem. This response was generated by delving into Te Ao Māori, and elevating Māori pedagogy, epistemology, and history to transform the cognitive skills associated with children's emerging literacy. In the opening paragraph of this thesis, this study was cemented in the broader context of an international human rights framework, in which literacy is viewed as a fundamental human right, intrinsically important for human development, and an

essential tool for pursuing other human rights. By creating a strong foundation on which the children's literacy will develop, and by providing whānau with tools and strategies to continue to strengthen this platform, it is declared the children participating in this study have enhanced their ability to access a multitude of human rights. In addition to this, it is argued these rights are critical to growing healthy, engaged, and prosperous individuals and communities, who continue to flourish in the future, and who have the ability to exercise self-determination at both an individual and collective level. In closing, the fundamental aim of this research, which was manifestly achieved in the study itself, is encapsulated in the title of this work, specifically the restoration of Māori literacy narratives to create contemporary stories of success.

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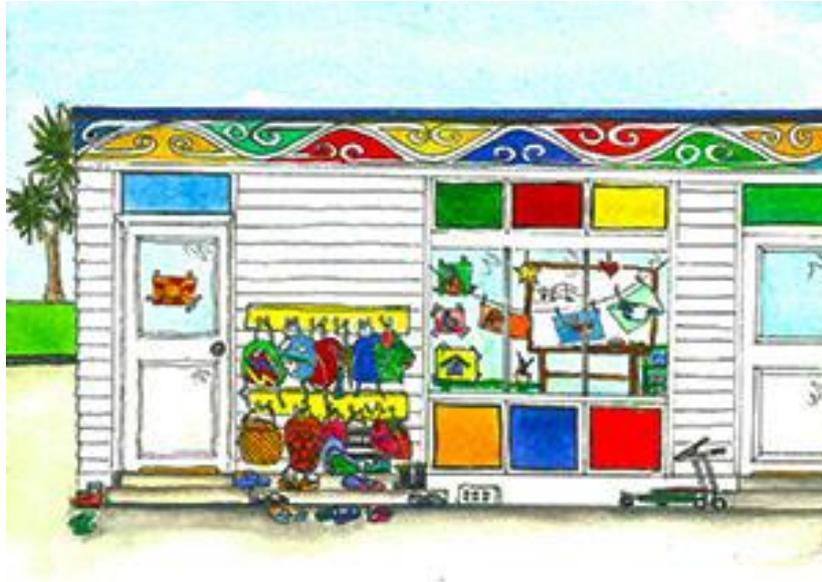
## GLOSSARY

Ako	To learn, to teach
Ātea	Area in front of the wharenuī (meeting house)
Haka	War chant
Hapū	Kinship group, clan, tribe, sub-tribe
Heke	Rafter
Hui-ā-whānau	Family meeting
Iwi	Extended kinship group, tribe, group of descendants from a common ancestor
Kapa Haka	Māori performing arts
Karakia	Incantation, ritual chant, chant, intoned incantation
Karanga	Formal call, ceremonial call, welcome call, call - a ceremonial call of welcome to visitors onto a marae, or equivalent venue
Kaupapa Māori	Māori ideology, Māori-centred
Kete	Basket
Kōhanga Reo	Māori immersion early childhood centres
Kōwhaiwhai	Painted scroll
Mana	Prestige, authority, control, power, influence, status, spiritual power
Marae	Community centre
Mātauranga	Knowledge, wisdom, understanding and skill
Mauri	Life principle, vital essence, special nature, a material symbol of a life principle, source of emotions, the essential quality and vitality of a being or entity
Mihimihi	Shorter speeches on one's whānau or tribal connections

Mōteatea	Traditional chant
Pākehā	Settlers of non-Māori descent, who originated predominantly from Britain, and their present-day descendants
Poupou	Pillar, post
Poutama	A stepped pattern of panels and woven mats that symbolises both genealogies, and the various levels of learning and intellectual achievement
Pūrakau	Stories or legends
Te Ao Māori	The Māori world
Te Reo Māori	The Māori language
Tuakana	Elder brother (of a male), elder sister (of a female), cousin (of the same gender from a more senior branch of the family)
Tukutuku	Ornamental lattice work
Wā whakatā	Rest time
Waiata	Songs or chants
Waiata ringa	Action song
Wānanga	Tribal knowledge, lore, learning - important traditional cultural, religious, historical, genealogical and philosophical knowledge
Whāikōrero	Oratory, oration, formal speech-making, address, speech
Whakapapa	Genealogy, genealogical table, lineage, descent - reciting whakapapa was, and is, an important skill and reflected the importance of genealogies in Māori society in terms of leadership, land and fishing rights, kinship and status. It is central to all Māori institutions
Whakataukī	Proverb, significant saying, formulaic saying, cryptic saying, aphorism

Whānau	Extended family, family group, a familiar term of address to a number of people - the primary economic unit of traditional Māori society
Whare wānanga	School of learning
Whareniui	Meeting house

## APPENDIX 1



# HE POUTAMA MĀTAURANGA TAKING THE NEXT STEPS

**We invite you to join us in a series of activities designed to support our tamariki as they make the important transition into primary school!**

**WHO:** Four year old tamariki at Nōku Te Ao, whānau, and our Nōku kaiako

**WHAT:** Whānau-driven activities that focus on growing healthy tamariki who are excited about discovering the world around them

**WHEN:** May 2017 to October 2017

**WHERE:** Our team will visit tamariki at Nōku Te Ao, as well as invite whānau to participate in two local workshops. We would also like to interview whānau about their aspirations for their tamaiti

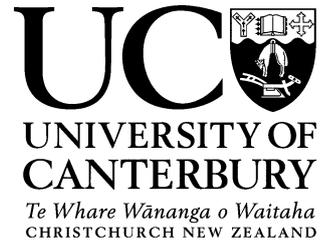
**WHY:** The move from early childhood to primary school is a significant milestone in the lives of our tamariki, and we want to support whānau on this exciting journey!

More detailed information on the project is included in the information sheet; to join us complete the consent form and drop it in the special box by the sign-in sheet. Mauri ora!

[melissa.derby@canterbury.ac.nz](mailto:melissa.derby@canterbury.ac.nz)  
021-296-4606

## APPENDIX 2

# College of Education, Health and Human Development



20 April 2017

## INFORMATON SHEET – Whānau

**Research project title [working]:** Ko te kai a te rangatira he kōrero: The effect of whānau-driven literacy activities on children’s emerging literacy in a bilingual (te reo Māori and English) setting

**Researcher:** Melissa Derby

**Supervisors:** Professor Angus Macfarlane and Professor Gail Gillon

Ko Takitimu te waka  
Ko Mauao te maunga  
Ko Te Awanui te moana  
Ko Waimapu ko Kopurererua ngā awa  
Ko Ngāti Ranginui te iwi  
Ko Ngāi Tamarāwaho te hapū  
Ko Melissa Hemaima Derby toku ingoa

My name is Melissa Derby and I am a doctoral student at the University of Canterbury. I extend an invitation for your whānau to take part in my doctoral research project that will examine the effect of whānau-driven literacy activities on children’s early literacy development. We know literacy is critical to positive educational experiences and outcomes. In New Zealand, research on children’s emerging literacy has been conducted primarily in monolingual English medium classrooms, or, to a lesser extent, in Māori immersion settings. Comparatively little, however, is known about literacy and ‘what works’ in a bilingual environment.

### *What is the purpose of the research?*

The purpose of this research is to examine literacy in a bilingual early childhood centre (Nōku Te Ao) with four-year old children, and specifically to determine the efficacy of conversation on children’s literacy outcomes. The study will take a holistic approach and involve whānau, educators, and tamariki. Attention will be focused on the effect of activities involving shared book reading and conversations on children’s language skills.

*How was I chosen for this research?*

Nōku Te Ao was chosen because it is a bilingual centre that provides high quality early childhood education. Your tamaiti is in their last year of preschool, and will soon make the important transition into primary school. For this reason your whānau has been identified as being able to make a valuable contribution to this research project, and to help me understand if what I am suggesting will be beneficial for our tamariki.

*What will happen in this research?*

I would like to involve your whānau and your tamaiti in the research project, which is designed to enhance children's success in learning to read. There are three parts to this project. One part involves your whānau together with your tamaiti, where I will collect three samples of you and your tamaiti reading together – one before the project starts, one during the project, and one when the project has finished. Another part involves me spending time with your tamaiti at Nōku Te Ao, where I will collect samples of your tamaiti talking to me, as well as us playing card games together. The third part involves your whānau participating in two workshops. These workshops are an opportunity for me to work with your whānau and the kaiako at Nōku Te Ao to determine if what I am suggesting is beneficial for you and your tamaiti.

*What are the discomforts and risks?*

There are no known risks to being part of this study. It has been informed by a significant body of research already conducted, which has allowed me to develop a study that is guided by best practice and that is ethically and culturally sound. Participation is voluntary and your whānau or your tamaiti can withdraw from the research at any time. If your whānau and your tamaiti withdraw, I will do my very best to remove any information relating to you, provided this is practically achievable.

*How will these discomforts and risks be alleviated?*

This research is guided by a kaupapa Māori research approach to ensure it is culturally appropriate for your tamaiti and your whānau, and for me as the researcher. I have also completed safety checking as per the 'Vulnerable Children Act requirements for students undertaking postgraduate programmes', which allows me to work with your whānau and tamaiti, and the project has been granted ethical approval by the University of Canterbury Educational Research Human Ethics Committee.

*What are the benefits?*

This project has been developed with the support of experts in te reo Māori, kaupapa Māori research, and literacy, and I have been careful to create what I hope is a rigorous study that will have numerous benefits for whānau and tamariki. The project aims to support and encourage strong whānau involvement in the development of children's emerging literacy skills. I hope that involvement in this project allows whānau to strengthen existing practices in the home that support literacy development and to also learn new strategies and techniques that can be used long after the study is finished, and with other whānau members and tamariki. This research ventures into relatively uncharted territory in that it is set specifically in a bilingual environment. I hope that the findings will contribute to the

development of literacy programmes that are suitable for bilingual children that will, in turn, support the continued success of our tamariki. Your involvement in this research will also assist me in completing a doctoral degree. To thank everyone for their contributions to my project, I will donate a library of books to Nōku Te Ao that I hope whānau and kaiako will enjoy sharing with the tamariki.

*How will my privacy be protected?*

The names of your whānau and tamaiti will not be used in the research, and the name 'Nōku Te Ao' will not be used without the permission of the kaiako and whānau of Nōku Te Ao. All data collected will be kept in a secure place and deleted after ten years. Participation in this research will be confidential, however your whānau information will be known to me as the researcher, so complete anonymity cannot be guaranteed. A summary of your involvement in the project will be available to you on completion, and I am happy to answer any questions you have about any part of this research. Some of the data collected in this study may be listened to or viewed by my supervisors. It is intended that the data collected in this research will be published in international and national peer-reviewed journals. My doctoral thesis will also be uploaded to the UC library database. Whenever the data is published, it will be published in summarised form with no individual names identified. If case data is used, then pseudonyms will be used to avoid identification.

*What are the costs of participating in this research?*

I will travel to Nōku Te Ao and to your home, if that suits, or to a public venue, to work with your whānau and tamaiti. You will also be invited to travel to Nōku Te Ao or to a local community hall to participate in two workshops, which will be approximately one and a half hours each. Participation in the project requires that you attend these workshops in order to receive the necessary information to work with your tamaiti. I will provide kai during these workshops, and will help with childcare at the venue if this is needed.

*What opportunity do I have to consider this invitation?*

I hope we can start working together in March 2017.

*How do I agree to participate in this research?*

In order to participate in this research project you need to complete and sign the attached consent form by Friday 12 May 2017.

*What do I do if I have concerns about this research?*

This project has received ethical approval from the University of Canterbury Educational Research Human Ethics Committee. Any concerns regarding this project should be notified in the first instance to the Project Supervisor (Cultural):

Professor Angus Hikairo Macfarlane  
Professor of Māori Research

University of Canterbury  
Phone: (03) 364-2987 extn. 6593

Concerns regarding the conduct of the research should be notified to The Chair, Educational Research Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch. Email: [human-ethics@canterbury.ac.nz](mailto:human-ethics@canterbury.ac.nz).

My contact details are:

Melissa Derby  
0212964606  
melissa.derby@pg.canterbury.ac.nz

Please sign the attached consent form if you understand and agree to you and your tamaiti taking part in the study, and return it to the project box by the sign-in sheet at Nōku Te Ao.

# Te Rāngai Ako me te Hauora

Maramawhā 2017



## PUKA PĀRONGO – Whānau

**Te Kaupapa Rangahau:** Ko te kai a te rangatira he kōrero: Ko te kawekawe o ngā ngohe reo matatini-ā-whānau e pā ana ki te whanaketanga mai o te reo matatini maea mō ngā tamariki kei ngā horopaki reorua (*The effect of whānau-driven literacy activities on children's emerging literacy in a bilingual [te reo Māori and English] setting*).

**Kairangahau:** Melissa Derby

**Ngā Kaitohutohu:** Professor Angus Macfarlane and Professor Gail Gillon

Ko Takitimu te waka  
Ko Mauao te maunga  
Ko Te Awanui te moana  
Ko Waimapu, ko Kopurererua ngā awa  
Ko Ngāti Ranginui te iwi  
Ko Ngāi Tamarāwaho te hapū  
Ko Melissa Hemaima Derby tōku ingoa

Tēnā koutou, Ko Melissa Derby tōku ingoa, he ākonga tohu kairangi ahau i Te Whare Wānanga o Waitaha. Nōku te whakamīharo kia tukuna atu te pōwhiri ki tō whānau kia uru mai ki te kaupapa rangahau nei me tōna whakatewhatewhatanga ki te kawekawe o ēnei ngohe reo matatini-ā-whānau e pā ana ki te whanaketanga mai o te reo matatini maea mō ngā tamariki. Kei te mōhio mātou i te whakahirahiratanga o te reo matatini ki ngā wheako rekareka me te angitū Mātauranga Māori. Kei Aotearoa nei, kua rangahau te nuinga o te rangahau reo matatini maea i ngā akomanga Ingarihi noa iho, he iti iho kei ngā akomanga rūmaki Māori rānei. I roto i te whakarite, he iti noa i ngā whakamāramatanga mō te reo matatini me ngā piki i ngā horopaki reorua.

*He aha te take o te rangahau?*

Ko te whakatewhatewha reo matatini i tētahi whare kōhungahunga reorua (Nōku Te Ao) i ngā tamariki o te pakeke whā te pūmaharatanga haumako i ngā tukunga iho reo matatini ā ngā tamariki. Ko te tino ia o te kaupapa rangahau nei e noho hāngai pū ai ki ngā whānau, ngā kaiako me ngā tamariki. Ka āta tirohia mātou ki te kawekawe o ngā ngohe ki ngā tukunga iho reo matatini me te pūmaharatanga haumako mō te oro mōhiotanga ā ngā tamariki me ngā pūkenga reo-ā-waha, i mōhiotia whānuitia hei huānga hiranga ki te whanaketanga reo matatini ā ngā tamariki.

### *Nā te aha ai i kōwhiringia mātou mō tēnei rangahau?*

He ratonga reorua a Nōku Te Ao, nā ko tēnei te take i kōwhiringia te whare kōhungahunga nei nō te mea he ratonga reorua e tuku ana i te mātauranga kōhungahunga e noho mai rā ki te tihi o te kounga. Ko tēnei anō te tau mutunga o tō tamaiti i te whare kōhungahunga nei, ā, nō muri ake ka neke atu ia ki te kura tuatahi. Kāti rā, ko te whāinga matua o te rangahau nei ko te whakakaha i ngā pikinga reo matatini mō ngā tamariki kua tau ki tēnei āhuatanga o ō rātou oranga, ā, me te whakaaro anō, e ai ki tō whare kōhungahunga ka taea e koutou te tākoha huia kaimanawa ki te kaupapa rangahau nei e whakanui ana i te angitū o ngā tamariki.

### *Ka ahatia mātou i te rangahau nei?*

Kei te pīrangī ahau ki te mahitahi i tō whānau me tō tamaiti i te kaupapa rangahau nei, i whakamahia ki te whakapiki ake i te angitū o ngā tamariki e ako ana ki te pānui. E toru ngā wāhanga o te kaupapa rangahau nei. Ko te mahitahi i tō whānau me tō tamaiti i a au e kohikohi ai i ngā tauira rangahau e rua o kōrua ko tō tamaiti e pānuitahi ana - tētahi ā mua i te tīmatanga me tētahi atu i te mutunga o te kaupapa rangahau. Ka rua, ka noho au i te whare kōhungahunga ki te kohikohi i ngā tauira rangahau o tō tamaiti pūkenga kōrero e mahi ana i ngā ngohe kēmu. Mēnā kei te pīrangī koe, koutou ko te whānau ki te hono ki ēnei ngohe, nau mai haere mai. Ka toru, ka tūhono mai i tō whānau ki ngā kaupapa ako e rua. Ka whai wā ēnei kaupapa ako māku ki te mahitahi i tō whānau me te kaiako kei Nōku Te Ao ki te kimi huarahi pai mā mātou koutou e tautoko ai i te whanaketanga reo matatini maea kia taea e rātou te tīmatatanga pai rawa atu i te kura.

### *He aha ngā taumahatanga me ngā tūraru?*

E kore ngā tūraru i mōhiotia mēnā ka uru mai koe ki te kaupapa rangahau nei. Kua whakamāramahia e te puna rangahau e noho hāngai pū ai ki tēnei kaupapa rangahau, ā, ka whai wā tēnei ki te hanga i tētahi ara rangahau i arahina e te mahi pai rawa atu i runga i te whakaaro, kua whakamanahia te horopaki tikanga matatika me ngā tikanga-ā-iwi. Ko te tikanga o te whai wāhitanga ko te tūao, ā, ka taea e tō whānau, tō tamaiti rānei te mawehe i te rangahau. Mēnā ka mawehe i tō whānau me tō tamaiti, ka ngana tēnei ki te tango i ngā mōhiotanga e whakaingoatia ana i a koe, mēnā ka taea e au i raro ngā tini āhuatanga.

### *Ka pēhea nā te hiki i ngā taumahatanga me ngā tūraru?*

E arahina ai i te rangahau nei e tētahi ara kaupapa Māori ki te whakatūturu i te ahurea arotau ki tō tamaiti me tō whānau, me au hoki ko te kairangahau. Kua whakatutukingia te taki haumarua e noho hāngai pū ai ki te Ture 'Vulnerable Children' mō ngā ākonga rangahau e ako ana i te taumata tāura, ā, e taea e au te mahi i tō whānau me tō tamaiti, ā, kua whakamanahia te kaupapa rangahau e te Kōmiti Tikanga Matatini mō te Rangahau Mātauranga i Ngā Tāngata nō Te Whare Wānanga o Waitaha.

### *He aha ngā painga?*

Kua whakawhanake i te kaupapa rangahau nei i te tautoko ā ngā mātanga reo, ngā mātanga rangahau kaupapa Māori me ngā mātanga reo matatini, ā, kua āta hangaia tētahi kaupapa rangahau pakari i kaingākautia e au i ngā hua maha mō ngā whānau me ngā tamariki. Ka arotahi te kaupapa rangahau

ki te tautoko me te akiaki i te whakaurutanga kaha ā whānau i te whanaketanga mai o ngā pūkenga reo matatini maea ā ngā tamariki. Ko te tūmanako ia e tuku ai te whakaurutanga ki te kaupapa rangahau nei mō te whānau ki te whakakaha i ngā whakaharatau o te kāinga i tautoko ai i te whanaketanga reo matatini, ā, ki te ako i ngā rautaki hou me ngā tāera kia mahi ai whai muri i te whakaotinga o te kaupapa rangahau i ētahi atu o te whānau me ētahi atu o ngā tamariki. Ka peka atu i te rangahau nei ki ngā wāhi hou nā te mea e noho ai i te kaupapa rangahau nei i te horopaki reorua. Ko te tūmanako ia ka tākohangia ngā kitenga ki te whanaketanga mai o ngā hōtaka reo matatini e tōtika ana ki ngā tamariki reorua, ā, mai i tēnei, e tautoko ai i te angitū matatū o ngā tamariki. Ka tautoko i tō whakaurutanga i te kaupapa rangahau nei ahau ki te whakatutuki i tōku nei tohu kairangi. Nā tō kaha me te tōngakingakitanga o tō whānau ki te tautoko i ahau, ka tākohangia ngā pukapuka e au ki Nōku te Ao, ā, ko te tūmanako ia ka koa te whānau me ngā kaiako kia tuari i ēnei pukapuka i ngā tamariki.

#### *Ka pēhea nā te haumarua o tōku tūmataiti?*

Kāore i te whakaingoa i tō whānau me tō tamaiti i te kaupapa rangahau, ā, mēnā ka whakaae i te whānau whānui o Nōku te Ao, ka mahia te ingoa o te whare kōhungahunga; nā rātou te tikanga. Ka whakaputu i ngā raraunga rangahau i tētahi wāhi haumarua, ā, whai muri i ngā tau tekau, ka parehongia. He tūmataiti te whakaurutanga i te kaupapa rangahau nei, heoi anō, ka whakamōhio ai i tō ingoa whānau ki ahau hei kairangahau, nā reira, kāore i te kī taurangi i tō tūmataititanga. Ka whakawātea i tētahi Whakakapinga o tō whakaurutanga i te kaupapa rangahau hei te otinga, ā, nōku te whakamīharo ki te whakautu i ngā pātai i whiua mai e pā ana ki ngā mea katoa o tēnei kaupapa rangahau. Ka taea e ōku kaitohutohu te whakarongo, te mātakitaki rānei i ētahi o te raraunga rangahau i kohia e au. Ā tōna wā, ko te tūmanako ia ka perehitia te raraunga rangahau i ngā pukapuka hautaka arotakengia-ā-hoa nō Aotearoa me te ao whānui. Ka tukua anōtia i taku tuhinga roa ki te Whare Puna Mātauranga me tōna pareni raraunga. Kia perehitia te raraunga, ka perehitia hei tuhinga whakarāpopoto i raro i te āhua tūmataiti. Ki te mahia te raraunga rangahau, ka whakamahia ngā ingoa parau ki te whakakaha ake i te tūmataititanga.

#### *He aha te utu o te hononga i te rangahau nei?*

Ka haere ahau ki Nōku te Ao me tō whare ki te mahi i tō whānau me tō tamaiti. Ka tonoa koe e au ki te hono ki tētahi rōpū uiuinga kia whai wā koe ki te tākohangia ki te kaupapa rangahau nei. Nō reira, kia kaha koe ki te whakauru atu ki tēnei rōpū uiuinga kia whakakaha ake i tō te whānau e tākoha ai ki te kaupapa rangahau; heoi anō, i te mutunga iho he kaupapa tūao. Ka tonoa anōtia koe ki te haere ki Nōku te Ao, ki tētahi hōro-ā-hapori rānei ki te whakauru i ngā hui rangahau e rua, kia kotahi haora me te hawhe mō ia hui. Mēnā ka uru mai koe ki tēnei kaupapa rangahau ko te tikanga whakature te tikanga o ēnei hui rangahau. Kia taea e koe te riro te pārongo tika ki te mahitahi i tō tamaiti. Māku te kai e horahia ki ēnei hui rangahau, ā, māku anō te tiaki tamaiti e whakarite i te wāhi hui rangahau mēnā ko koe tērā.

#### *He aha te roanga o te wā kia whaiwhakaaro i te tono nei?*

Kāore anō kia whakaritea ngā rā me ngā wā; ā tōna wā ka whakaritea (TBC).

*Ka pēhea nā te whakaae ki te whakauru i te rangahau nei?*

Ki te pīrangi koe ki te uru mai ki te rangahau nei, ko te tikanga ko tēnei: me whakatutukingia, me waitohungia anōtia te puka whakaae kua tāpiringia. Kāti, he puka whakaae motuhake mō tō tamaiti kia uru mai ia ki te kaupapa Rangahau nei.

*Ka riro i ahau i ngā kōrero urupare o ngā hua mō te kaupapa rangahau nei?*

Āe - māku te whakakapinga paku o tō whakaurutanga ki te kaupapa Rangahau nei.

*Mēnā he āwangawanga āku ki te kaupapa Rangahau nei, ka aha ahau?*

Kua whakamanahia te kaupapa rangahau e te Kōmiti Tikanga Matatini mō te Rangahau Mātauranga i Ngā Tāngata nō Te Whare Wānanga o Waitaha. Mēnā he āwangawanga āu, tuatahi me whakapā atu ki te Kaitohutohu (Ahurea):

Professor Angus Macfarlane  
Ahorangi Mātauranga Māori  
Te Whare Wānanga o Waitaha  
Phone: (03) 364-2987 extn. 6593

Whakapā atu ki te Manu Kōrero o te Kōmiti Tikanga Matatini mō te Rangahau Mātauranga i Ngā Tāngata nō Te Whare Wānanga o Waitaha i āu nā āwangawanga e pā ana ki ngā tikanga matatika:

Te Whare Wānanga o Waitaha  
Pūrangi Motuhake 4800  
Ōtautahi  
Īmera: [human-ethics@canterbury.ac.nz](mailto:human-ethics@canterbury.ac.nz).

Anei aku nei mea taipitopito:

Melissa Derby  
0212964606  
melissa.derby@pg.canterbury.ac.nz

Tēnā koa, waitohungia te puka whakaae mēnā kei te mārara i ngā mea katoa, ā, ka whakaae koe ki tō whakaurutanga me tērā hoki o tō tamaiti i tēnei kaupapa rangahau; whakahokia ki a Whaea Dy i Nōku te Ao.

**APPENDIX 3**

**College of Education, Health and  
Human Development**

**CONSENT FORM**

**Research project title [working]:** Ko te kai a te rangatira he kōrero: The effect of whānau-driven literacy activities on children’s emerging literacy in a bilingual (te reo Māori and English) setting

**Researcher:** Melissa Derby

**Supervisors:** Professor Angus Macfarlane and Professor Gail Gillon

- We have read and understood the information provided about this research project in the Information Sheet dated 20 April 2017
- We have had an opportunity to ask questions and to have them answered
- We understand that notes will be taken during interviews, and that interviews will also be recorded and transcribed. A written transcript of the audio-recording interviews will be given to participants
- We understand that we may withdraw at any time without being disadvantaged in any way
- If we withdraw, we understand that all relevant information including tapes and transcripts, or parts thereof, will be destroyed
- We agree to take part in this research

Signature .....

Name .....

Email and phone number .....

.....

Date .....

# Te Rāngai Ako me te Hauora

## PUKA WHAKAAE - Whānau

**Te Kaupapa Rangahau:** Ko te kai a te rangatira he kōrero: Ko te kawekawe o ngā ngohe reo matatini-ā-whānau e pā ana ki te whanaketanga mai o te reo matatini maea mō ngā tamariki kei ngā horopaki reorua (*The effect of whānau-driven literacy activities on children’s emerging literacy in a bilingual [te reo Māori and English] setting*).

**Kairangahau:** Melissa Derby

**Ngā Kaitohutohu:** Professor Angus Macfarlane and Professor Gail Gillon

- Kua pānuhia, kua māramahia anōtia mātou te pārongo ki tēnei kaupapa rangahau i te Puka Pārongo Maramawhā 2017.
- Kua utua katoatia ā mātou pātai.
- Ka mārama mātou ki te āhua o ngā uiuinga arā, ka hopukina ngā kōrero e ngā mīhini tēpa whakamau, kātahi ka patopatongia. Ka rua ka riro i a mātou i ēnei tuinga.
- E mārama ana mātou i te hiahia kia puta atu i te kaupapa rangahau te aukati rānei i mua noa atu i te otinga o te uiuitanga, ka mutu, kāore mātou e hāmenetia.
- Ki te puta atu mātou, e mōhio ai mātou ka whakakorengia ngā pārongo katoa tae atu ki te rīpene me ngā kōrero i tāia.
- Kei te whakaae mātou ki te whakauru ki tēnei kaupapa rangahau.
- Kei te pīrangi mātou ki te whiwhi whakakapinga paku o tō mātou whakaurutanga i te kaupapa rangahau nei (tohu tika i te āe, te kāo rānei):

Āe

Kāo

Waitohu .....

Ingoa .....

Waea pūkoro me īmēra .....

.....

Te rā .....

## APPENDIX 4

### Interview Questions for Whānau

I am interested in your thoughts, perceptions, feelings, beliefs, experiences and opinions. There is no right or wrong answer. The following questions are a guide to prompt discussion.

#### Te Tīmatanga:

- Information sheet explaining the research and any questions answered
- You can withdraw at any time with no repercussions
- Is it ok to record the interview?
- Consent form to sign if it hasn't already been signed

#### Mihi:

- Ko wai koe, ko wai au (at the very outset of the kōrero)
- Tell me a bit about yourself – where did you grow up, tell me about your whānau, where did you go to school, what do you do for work, have you learnt te reo Māori at any stage in your life?

#### He Pātai:

- When you were at school, do you remember te reo Māori featuring in the classroom (on the walls, in the teachers' vocabulary, in the content of the curriculum)? If yes/no, tell me about that. If yes/no, how did that make you feel at the time? How does it make you feel now as you reflect?
- How do you feel about te reo Māori? Is it important to you? Should it be important to New Zealand? What place do you think it should have in our education system?
- What aspirations do you have for your child when it comes to te reo Māori? What about for your mokopuna in the future?
- What support (both at home and in the classroom) do you think would be of use in helping you to achieve these goals?
- Do you speak te reo Māori at home? If yes/no, what sorts of things would help to strengthen and support te reo Māori in the home for your whānau?
- Do you read/talk to your children in te reo Māori? If so, how often?
- Do you talk about the past (and recent experiences) with your child? If so, tell me about that.
- Why did you choose to send your tamaiti to Nōku Te Ao?
- What benefits do you believe Nōku Te Ao can offer to your tamaiti and whānau?
- What challenges, if any, do you face in your pursuit of raising a bilingual child?
- At this stage, do you plan to continue with Māori medium or bilingual education for your tamaiti? Why/why not?

#### Te Mutunga:

- Clarification of any material that is unclear
- Participants to reflect upon the interview, and ask any questions

## APPENDIX 5

### Pre-Intervention Questionnaire

#### Section One: Reading Together

1. How often do you, or other members of your whānau, read to your tamaiti?
  - a. Less than once a week
  - b. 1-2 times per week
  - c. 3-4 times per week
  - d. 5-6 times per week
  - e. 7 or more times per week
2. During reading, how often do you read the book as it is written?
  - a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
3. During reading, how often do you read the book, but also talk about the pictures and/or story with your tamaiti while reading?
  - a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
4. During reading, how often do you read the book, but also talk about sounds of words with your tamaiti while reading (e.g. emphasizing first sounds or rhyme)?
  - a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
5. During reading, how often do you read the book and talk about letters and how to read words with your tamaiti while reading (e.g. that is an 'a,' or that says 'whare')?
  - a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
6. During reading, how often do you talk mostly about the pictures and read only some of the text?

- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
7. During a typical week, how often do you read rhyming story books with your tamaiti?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
8. During a typical week, how often do you read story books that don't rhyme with your tamaiti?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
9. During a typical week, how often do you read non-fiction picture books with your tamaiti?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
10. During a typical week, how often do you read alphabet books with your tamaiti?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
11. How important to your whānau is reading together at home?
- a. Extremely important
  - b. Reasonably important
  - c. Not that important
  - d. Not sure

Please explain:

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12. When you read together at home with your tamaiti, what things do you enjoy most about it?  
(select any that apply)
- a. The physical closeness
  - b. The social / interpersonal aspects
  - c. The learning and knowledge gains
  - d. The growth in personal confidence
  - e. Other: \_\_\_\_\_
13. How would you rate your child's interest in reading together?

- a. Very interested
  - b. Quite interested
  - c. Not very interested
  - d. Not at all interested
14. How would you rate your child's interest in reading alone?
- a. Very interested
  - b. Quite interested
  - c. Not very interested
  - d. Not at all interested
15. The language(s) spoken by your tamaiti are:
- a. \_\_\_\_\_
  - b. \_\_\_\_\_
  - c. \_\_\_\_\_
16. Your child's first language is: \_\_\_\_\_
17. Your child's strongest / preferred language is: \_\_\_\_\_
18. The main language spoken at home is: \_\_\_\_\_
19. If more than one language is spoken at home, during an average week what would you estimate to be the percentages that are spoken to and by your tamaiti / child?
- a. English \_\_\_%
  - b. Māori \_\_\_%
  - c. Other language \_\_% (Name of the language \_\_\_\_\_)
20. How important is it to your whānau to maintain multiple languages for your tamaiti / child?
- a. Very important
  - b. Quite important
  - c. Not that important
  - d. Not important at all
21. If your tamaiti speaks another language besides English (name this language: \_\_\_\_\_), how often does your child do the following in that language?

	Often	Sometimes	Hardly ever	Never
Greet and/or farewell people				
Introduce themselves to others				
Recognise when it is relevant to speak / use the language				
Use simple (naming) words to identify particular objects				
Use and respond to simple sentences, phrases and instructions				

Ask simple questions				
Use more complex sentences and phrases				
Sing songs, recount proverbs / prayers				
Read and understand written words				

22. During a typical week, how often might your tamaiti see you or others in your whānau reading a book or other printed material?

- a. Never
- b. Rarely
- c. Sometimes
- d. Often
- e. Very often

23. If you do read in front of your child, during a typical week, how often does your tamaiti ask you about what you are reading?

- a. Never
- b. Rarely
- c. Sometimes
- d. Often
- e. Very often

### Section Two: Other Activities

1. During a typical week, how often do you play other word games (e.g. I Spy) or other games involving naming the first sound in a word with your tamaiti?

- a. Never
- b. Rarely
- c. Sometimes
- d. Often
- e. Very often

2. During a typical week, how often do you teach your tamaiti to recognise letters?

- a. Never
- b. Rarely
- c. Sometimes
- d. Often
- e. Very often

3. During a typical week, how often do you teach your tamaiti how to print letters?
  - a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
4. During a typical week, how often do you teach your tamaiti about letter or word sounds?
  - a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
5. During a typical week, how often do you talk with your tamaiti about things you have done together in the past?
  - a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
6. During a typical week, how often do you talk with your tamaiti about things you will do in the future?
  - a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
7. During a typical week, how often do you talk with your tamaiti about their own feelings?
  - a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
8. During a typical week, how often do you talk with your tamaiti about others' feelings (including fictional characters from books or television)?
  - a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often

Do you have anything to add about your tamaiti's general health and wellbeing?

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Name: \_\_\_\_\_

Date: \_\_\_\_\_

# HE KŌRERO PĀNUIHIA, HE HOKINGA MAHARA

Welcome to Rich Reading and Reminiscing! You and your tamaiti will receive 12 new books over the next six weeks - six in English and six in te reo Māori. You can choose to read both books or just the English or te reo Māori book with your tamaiti. Please read your chosen book/s 3 times and follow the prompts!

## Orange Prompts (1)

Read all orange prompts on your FIRST read through of the book. These prompts will focus mostly on exploring pictures and recalling story events

## Blue Prompts (2)

Read all blue prompts on your SECOND read through of the book. Now that your tamaiti is familiar with the story, these prompts will mostly focus on definitions and making connections

## Green Prompts (3)

Read all green prompts on your THIRD reading of the book. Time to dive deeper into the story! These prompts will ask about character's emotions and why events happened

## Reminiscing

These prompts are in the back cover of the book. These conversations can take place any time, such as over kai or in the car

## REMEMBER

- Pause before supplying an answer
- Ask 'wh-' questions
- Echo and Add
- HAVE FUN!



# ATA WHAKARONGO KI TE TANGI A TE MANU, TUI TUI TUIA

Welcome to Stimulating Sound Sensitivity! You and your tamaiti will receive 12 new books over the next six weeks - six in English and six in te reo Māori. You can choose to read both books or just the English or te reo Māori book with your tamaiti. Please read your chosen book/s 3 times and follow the prompts!

## Orange Prompts (1)

Read all orange prompts on your FIRST read through of the book. These prompts will focus mostly on rhyme

## Blue Prompts (2)

Read all blue prompts on your SECOND read through of the book. Now that your tamaiti is familiar with the story, these prompts will mostly focus on individual sounds within words

## Green Prompts (3)

Read all green prompts on your THIRD reading of the book. Time to encourage your tamaiti to give it a go!

## Word Play

These prompts are in the back cover of the book. These activities can take place any time, such as over kai or in the car

### REMEMBER

- Pause before supplying an answer
- Emphasise sounds in words and talk about them
- HAVE FUN!



## **APPENDIX 8**

### **English Books (RRR)**

Little Kiwi's Matariki

Ruru's Hangi

Dad's Takeaways

Jumblebum

Koro's Medicine

The Lion in the Meadow

### **Te Reo Māori Books (RRR)**

E Pōi e Po

Ngā Rēme Riki e Toru

He Taniwha i te Kura

He Tamaiti Nō Aotearoa

Kei Reira Ngā Weriweri

Rāhui

### **English Books (SSS)**

A Summery Saturday Morning

Kuwi's Huhu Hunt

Louie the Tuī

Rumpus at the Vet

Room on the Broom

Marmaduke Duck and the Marmalade Jam

### **Te Reo Māori Books (SSS)**

Kei te Kīhini o te Pō

Te Mīhini Iti Kōwhai

Nā wai te waka i totohu?

Te Tanguruhau

Te Haere ki te Rapu Pea

Hairy Maclary nō te Tēri a Tānarahana



Name/Ingoa: \_\_\_\_\_

Week/Wiki: \_\_\_\_



# Our Reading Chart



Little Kiwi's Matariki

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------



Activities/Ngā mahi

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------



Rāhui

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------



Activities/Ngā mahi

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------



Ask your tamaiti to stamp the chart when you read or do an activity! Feel free to provide any feedback about the books or activities on the back of this chart!



HAVE FUN!



APPENDIX 10



# Book Evaluation

	Little Kiwi's Matariki	1	2	3	4	5	NA	
	Ruru's Hangi	1	2	3	4	5	NA	
	Dad's Takeaways	1	2	3	4	5	NA	
	E Pīoi e Po	1	2	3	4	5	NA	
	Ngā Rēme Riki e Toru	1	2	3	4	5	NA	
	Jumblebum	1	2	3	4	5	NA	
	He Tamaiti Nō Aotearoa	1	2	3	4	5	NA	
	Koro's Medicine	1	2	3	4	5	NA	
	Te Taniwha i te Kura	1	2	3	4	5	NA	
	Lion in the Meadow	1	2	3	4	5	NA	
	Kei Reira Ngā Weriweri	1	2	3	4	5	NA	
	Rāhui	1	2	3	4	5	NA	

Give the books you read a rating - 1 being not so good and 5 being fantastic! This will help me to know which books to keep in the future. If you didn't read a book then circle NA. Feel free to offer extra comment on the back of this sheet. THANK YOU!





# Book Evaluation

	Summery Saturday Morning	1	2	3	4	5	NA	
	Kei Te Kīhini o te Pō	1	2	3	4	5	NA	
	Kuwi's Huhu Hunt	1	2	3	4	5	NA	
	Te Mīhini Iti Kōwhai	1	2	3	4	5	NA	
	Louie the Tūi	1	2	3	4	5	NA	
	Nā wai te waka i totohu?	1	2	3	4	5	NA	
	Rumpus at the Vet	1	2	3	4	5	NA	
	Te Tanguruhau	1	2	3	4	5	NA	
	Room on the Broom	1	2	3	4	5	NA	
	Te Haere ki te Rapu Pea	1	2	3	4	5	NA	
	Marmaduke Duck	1	2	3	4	5	NA	
	Rāhui	1	2	3	4	5	NA	

Give the books you read a rating - 1 being not so good and 5 being fantastic! This will help me to know which books to keep in the future. If you didn't read a book then circle NA. Feel free to offer extra comment on the back of this sheet. THANK YOU!



## APPENDIX 11

### INITIAL PHONEME IDENTIFICATION TASKS (ENGLISH)

We're going to play a game now using some pictures. I'm going to ask you some questions about the pictures and you point to the one you think is right. I'll show you.

Model: Here is a **balloon**, a fish and a cat. Which one starts like this? (B) Balloon, fish, cat. The balloon does! B. Balloon.

Now it's your turn. This one is to practise. Here is a chair, a baby and a **table**. Which one starts like this? (T)

Let's practice one more. Here is a **garden**, a river and a pen. Which one starts like this? (G)

Ok are you ready? If you're not sure of the answer that's ok. Just do your best. Let's go!

1. Here is a **curtain**, a bell and an arm. Which one starts like this? (C)
2. Here is a fish, some **toast** and a pen. Which one starts like this? (T)
3. Here is a baby, the **sea** and a mouth. Which one starts like this? (S)
4. Here is a lake, a mug and a **boy**. Which one starts like this? (B)
5. Here is a **letter**, a road and a garden. Which one starts like this? (L)
6. Here is a cat, a **duck** and a basket. Which one starts like this? (D)
7. Here is a **knife**, a table and a river. Which one starts like this? (N)
8. Here is a phone, a spoon and a **mountain**. Which one starts like this? (M)
9. Here is a baby, a **key** and a lake. Which one starts like this? (K)
10. Here is a **road**, a mug and a fish. Which one starts like this? (R)

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX 12

### INITIAL PHONEME IDENTIFICATION TASKS (MĀORI)

We're going to play a game now using some pictures. I'm going to ask you some questions about the pictures and you point to the one you think is right. I'll show you.

Model: Here is a rama, a **kurī** and an ika. Which one starts like this? (K) Rama, kurī, ika. The kurī does! K. Kurī.

Now it's your turn. This one is to practise. Here is a ngeru, a pahi and a **tēpu**. Which one starts like this? (T)

Let's practice one more. Here is an awa, a **poi hau** and a māra. Which one starts like this? (P)

Ok are you ready? If you're not sure of the answer that's ok. Just do your best. Let's go!

1. Here is a **manu**, a heru and a rākau. Which one starts like this? (M)
2. Here is an ika, a heihei and a **tama**. Which one starts like this? (T)
3. Here is a māra, a **kete** and a poi hau. Which one starts like this? (K)
4. Here is a **pēpi**, a kau and a ngeru. Which one starts like this? (P)
5. Here is a waha, a **heihei** and a kurī. Which one starts like this? (H)
6. Here is a ringa, a kura and some **niho**. Which one starts like this? (N)
7. Here is the moana, a **roto** and a kaka. Which one starts like this? (R)
8. Here is a **waha**, a heru and a tūru. Which one starts like this? (W)
9. Here is a māra, a **whetu** and a rākau. Which one starts like this? (WH)
10. Here is a **ngeru**, a kau and a poi hau. Which one starts like this? (NG)

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX 13

### SYLLABLES TASKS (ENGLISH)

We're going to play a game now using some pictures and clapping. I'll show you.

Model: Here is a balloon. Can you say balloon? Now I'm going to say it with my hands. Ba-lloon.

Now it's your turn. This one is to practise. Here is a bus. Can you say bus? Now can you say it with your hands?

Let's practice one more. Here is a mountain. Can you say mountain? Now can you say it with your hands?

Ok are you ready? If you're not sure of the answer that's ok. Just do your best. Let's go!

1. Here is a hat. Can you say hat? Now can you say it with your hands?
2. Here is a garden. Can you say garden? Now can you say it with your hands?
3. Here is a kangaroo. Can you say kangaroo? Now can you say it with your hands?
4. Here is a helicopter. Can you say helicopter? Now can you say it with your hands?
5. Here is a curtain. Can you say curtain? Now can you say it with your hands?
6. Here is an elephant. Can you say elephant? Now can you say it with your hands?
7. Here is a basket. Can you say basket? Now can you say it with your hands?
8. Here is a fish. Can you say fish? Now can you say it with your hands?
9. Here is a dinosaur. Can you say dinosaur? Now can you say it with your hands?
10. Here is a bell. Can you say bell? Now can you say it with your hands?

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX 14

### SYLLABLES TASKS (MĀORI)

We're going to play a game now using some pictures and clapping. I'll show you.

Model: Here is a kete. Can you say kete? Now I'm going to say it with my hands. Ke-te.

Now it's your turn. This one is to practise. Here is a whetu. Can you say whetu? Now can you say it with your hands?

Let's practice one more. Here is a wharenuī. Can you say wharenuī? Now can you say it with your hands?

Ok are you ready? If you're not sure of the answer that's ok. Just do your best. Let's go!

1. Here is a pounamu. Can you say pounamu? Now can you say it with your hands?
2. Here is a nanekoti. Can you say nanekoti? Now can you say it with your hands?
3. Here is some kai. Can you say kai? Now can you say it with your hands?
4. Here is an ika. Can you say ika? Now can you say it with your hands?
5. Here is a kiore. Can you say kiore? Now can you say it with your hands?
6. Here is a rakiraki. Can you say rakiraki? Now can you say it with your hands?
7. Here is a pōtae. Can you say pōtae? Now can you say it with your hands?
8. Here is a rā. Can you say rā? Now can you say it with your hands?
9. Here is a heihei. Can you say heihei? Now can you say it with your hands?
10. Here is the moana. Can you say moana? Now can you say it with your hands?

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX 15

### Peters Chair (Keats, 1967)

1. **What was the boy's name in the story?** (1 point for Peter)
2. **What was his little sister's name?** (1 point for Susie)
3. **Why did Peter want to run away from home?** (1 point for "because he was jealous of his baby sister"/"because they were painting his stuff"/"giving his stuff away")
4. **What are some of the things Peter took with him when he ran away?** (1 point for two of the following items, .5 point for one: picture, chair, dog, stuffed toy, cookies)
5. **At the end of the story, what did Peter do with the chair?** (1 point for "painted it." If the child says "went outside," say "yes, but what did he do at the end?" If no response, say "he painted it pink with his father.")
6. **Why do you think he did that?** (1 point for an answer containing appropriate emotion, such as "because he likes Susie now," or "because he feels better.")

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX 16

Kei Hea Taku Pōtae (Waiariki, 1998)

1. **Nā wai tōna pōtae i ngaro? Who lost his hat?** (1 point for “koro/koroua”)
2. **Kei te haere te koroua ki hea?** (1 point for “māngoingoi”)
3. **I kimi te koroua i tōna pōtae i hea? Where did the koroua search for his hat?** (1 point for two of the following, 0.5 point for one “kei runga te tūru”/“kei raro i te moenga”/“kei roto i te whare kaukau”/“kei muri i te tatau”)
4. **He aha ētahi taputapu hī ika i kawea atu e te koroua? What are some of the things the koroua took fishing?** (1 point for two of the following items, 0.5 point for one: “mōunu, aho, kete, kamupūtu, māripi”)
5. **I ahatia te pōtae e ngā manu? What did the birds do with the hat?** (1 point for “mā ngā manu e whakapai hei kōhanga mō ngā pīpī.”)
6. **I te mutunga o te kōrero, i haere atu te koroua ki hea? At the end of the story, where did the koroua go?** (1 point for “māngoingoi”)

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX 17

### PICTURE NAMING TASK

We are going to look at some pictures together, and I'll ask you what they are. It's ok if you're not sure; you can say you don't know and we can move on to the next one. Are you ready? Let's go! Can you tell me what this is?

1. Burrow	Y	N
2. Oyster	Y	N
3. Pikopiko	Y	N
4. Meadow	Y	N
5. Ketchup	Y	N
6. Weasel/wīhara	Y	N
7. Maunga	Y	N
8. Yacht/waka	Y	N

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX 18

### Post-Intervention Questionnaire

**When responding, please think about your actions, activities, perceptions and beliefs during and after your participation in the He Poutama Mātauranga programme**

#### Section One: Reading Together

24. How often do you, or other members of your whānau, read to your tamaiti?
- Less than once a week
  - 1-2 times per week
  - 3-4 times per week
  - 5-6 times per week
  - 7 or more times per week
25. During reading, how often do you read the book as it is written?
- Never
  - Rarely
  - Sometimes
  - Often
  - Very often
26. During reading, how often do you read the book, but also talk about the pictures and/or story with your tamaiti while reading?
- Never
  - Rarely
  - Sometimes
  - Often
  - Very often
27. During reading, how often do you read the book, but also talk about sounds of words with your tamaiti while reading (e.g. emphasizing first sounds or rhyme)?
- Never
  - Rarely
  - Sometimes
  - Often
  - Very often
28. During reading, how often do you read the book and talk about letters and how to read words with your tamaiti while reading (e.g. that is an 'a,' or that says 'whare')?
- Never
  - Rarely
  - Sometimes
  - Often
  - Very often

29. During reading, how often do you talk mostly about the pictures and read only some of the text?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
30. During a typical week, how often do you read rhyming story books with your tamaiti?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
31. During a typical week, how often do you read story books that don't rhyme with your tamaiti?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
32. During a typical week, how often do you read non-fiction picture books with your tamaiti?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
33. During a typical week, how often do you read alphabet books with your tamaiti?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
34. How important to your whānau is reading together at home?
- a. Extremely important
  - b. Reasonably important
  - c. Not that important
  - d. Not sure

Please explain:

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35. When you read together at home with your tamaiti, what things do you enjoy most about it? (select any that apply)
- a. The physical closeness
  - b. The social / interpersonal aspects
  - c. The learning and knowledge gains

- d. The growth in personal confidence
  - e. Other: \_\_\_\_\_
36. How would you rate your child's interest in reading together?
- a. Very interested
  - b. Quite interested
  - c. Not very interested
  - d. Not at all interested
37. How would you rate your child's interest in reading alone?
- a. Very interested
  - b. Quite interested
  - c. Not very interested
  - d. Not at all interested
38. During a typical week, how often might your tamaiti see you or others in your whānau reading a book or other printed material?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
39. If you do read in front of your child, during a typical week, how often does your tamaiti ask you about what you are reading?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often

### **Section Two: Other Activities**

9. During a typical week, how often do you play other word games (e.g. I Spy) or other games involving naming the first sound in a word with your tamaiti?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
10. During a typical week, how often do you teach your tamaiti to recognise letters?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
11. During a typical week, how often do you teach your tamaiti how to print letters?
- a. Never

- b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
12. During a typical week, how often do you teach your tamaiti about letter or word sounds?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
13. During a typical week, how often do you talk with your tamaiti about things you have done together in the past?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
14. During a typical week, how often do you talk with your tamaiti about things you will do in the future?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
15. During a typical week, how often do you talk with your tamaiti about their own feelings?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often
16. During a typical week, how often do you talk with your tamaiti about others' feelings (including fictional characters from books or television)?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Very often

### **He Poutama Mātauranga Programme**

1. How do you rate your tamaiti's enjoyment of the programme? (1 = did not enjoy it at all, 5 = enjoyed it immensely)
- a. 1      2      3      4      5

2. How do you rate your enjoyment of the programme? (1 = did not enjoy it at all, 5 = enjoyed it immensely)  
a. 1      2      3      4      5

3. What did you enjoy most about the programme?

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4. What did you enjoy least about the programme?

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5. Do you notice any differences in your tamaiti that you believe are a result of the programme?  
Please explain:

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6. Do you notice any differences in whānau activities that you believe are a result of the programme? Please explain:

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7. Do you have any other comments about the programme?

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8. Do you have anything to add about the general health and wellbeing of your tamaiti since the programme?

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Name: \_\_\_\_\_

Date: \_\_\_\_\_