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**TALK MORE:
STUDENT LEARNING THROUGH RECIPROCAL CONVERSATIONS**

A thesis
submitted in fulfilment
of the requirements for the degree of Doctor of Philosophy
at
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ABSTRACT

This research explored ways of improving the oral language development of Year 1 children in four low decile mainstream schools who were making limited progress in literacy. Over 82% of these students were Māori. Due to the continued impact of past educational policies and the subsequent interruption of the intergenerational transmission of the mother tongue, many Māori children are not exposed to proficient and fluent models either of spoken English or of spoken Māori. Such children struggle to make the English literacy progress expected of them by schools and communities. The central focus of the research was to evaluate a claim that Year 6 students (tuākana) could make a substantial improvement in the oral language achievement of Year 1 students (teina), through engaging with them in regular conversational contexts using the TALES (Talk, Ask, Listen, Encourage, and Say) procedures. This pedagogical approach is understood as one which was culturally responsive for these students.

Quantitative analysis of data from three quantitative outcome measures (Record of Oral Language, Junior Oral Screening Tool, and Auditory-Vocal Association Assessment of Verbal Attainments) demonstrated that there were substantial oral language gains for the 72 teina students involved in the study. The quantitative analysis also demonstrated that these gains occurred most strongly during the phases in which the TALES procedures were being implemented by the 72 tuākana students, in accord with the multiple baseline design. Detailed qualitative analysis of a random sample of six of the 72 pairs illustrated both the effectiveness of the tuākana language interaction with the teina, and the different ways that the tuākana were able to implement the TALES procedure. Analysis of five minute probes of transcripts over six weeks from these six tuākana – teina pairs indicated that a wide range of literacy activities and conversations took place. The unique learning needs and personal learning intentions of each tuakana and teina were successfully monitored using this five minute probe procedure. Powerful reciprocal learning processes were evident in transcripts of conversations between the tuākana and the teina, and also within feedback and feed-forward meetings between the tuākana and key teachers.

The substantial oral language gains for the teina students in this study were achieved within learning contexts that were social and interactive, and that embodied the principles of *ako* (learning and teaching roles were shared) and *whakawhanaungatanga* (building caring and supportive relationships). These principles are among those that underpin pedagogies that are culturally responsive (Bishop & Glynn, 1999; Glynn, Wearmouth, & Berryman, 2006; Ladson-Billings, 1995, 2006) and transformative. The results of this research study give a clear message to mainstream non-Māori teachers, that they *can* make a positive and substantial difference to the learning outcomes of their Māori students.

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LIST OF ABBREVIATIONS:

ERO	Education Review Office “The government department which reports publicly on the quality of education in all New Zealand schools and early childhood centres” (www.ero.govt.nz)
JOST	Junior Oral Screening Tool
MOE	Ministry of Education “The government's lead advisor on the New Zealand education system, shaping direction for sector agencies and providers” (www.minedu.govt.nz)
ROL	Record of Oral Language
RTL B	Resource Teacher Learning and Behaviour “RTL B are trained in an inclusive model to work with and provide itinerant specialist support to students and teachers to improve the education outcomes for students with moderate learning and/or behaviour difficulties. There are around 750 RTL B positions in 190 clusters around New Zealand. Of these, around 40 are RTL B Māori who provide support in Māori medium settings” (www.tki.org.nz)
RTSN	Resource Teacher Special Needs Prior to the development of the RTL B service RTSN teachers supported students with learning difficulties, typically using a deficit mode of work within which students were withdrawn from their classrooms
TALES	Talk; Ask; Listen; Encourage; Say

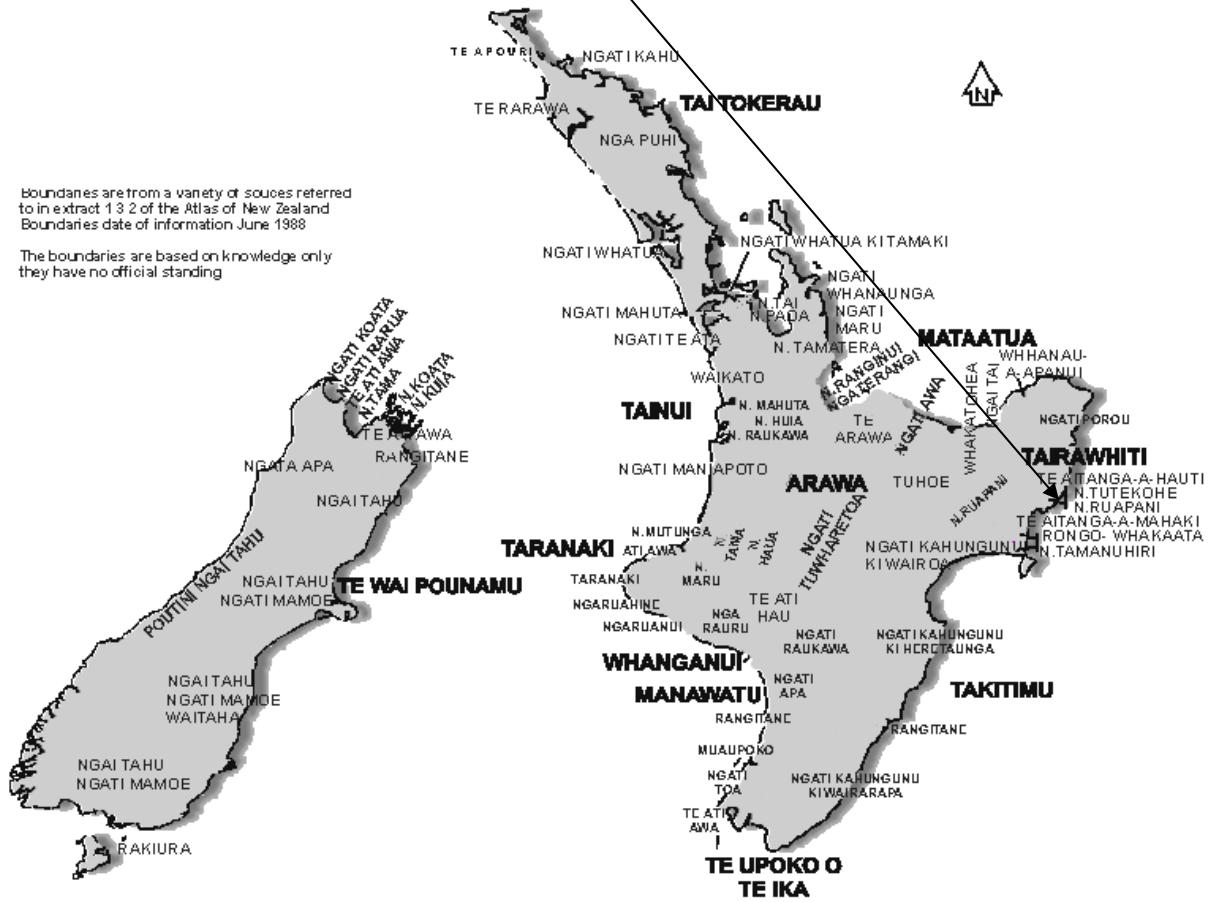
GLOSSARY OF MĀORI WORDS:

ako	literally, to learn as well as to teach. The reciprocity of a person being both a learner and a teacher according to the teaching/learning context, reciprocal learning (Bishop & Glynn, 1999)
aroha	love (Ryan, 1997)
hui	literally a meeting, a gathering (Bishop & Glynn, 1999)
kai	food, eat, dine, nutrient (Ryan, 1997)
kākahu	cloak (Ryan, 1997)
kaumātua	a respected elder (Bishop & Glynn, 1999)
kaupapa Māori	Māori philosophy and principles (Bishop & Glynn, 1999)
kōrerorero	chat, conversation (Ryan, 1997)
kupu	text, word, message, remark (Ryan, 1997)
kura kaupapa Māori	Māori-medium (language) primary school (Year 1 – 8) (Bishop & Glynn, 1999)
mana	prestige, divine right, influence, status, identity (Bishop & Glynn, 1999)
manāki/manaaki	to care for, show respect, hospitality (Bishop & Glynn, 1999)
Māori	indigenous inhabitant of New Zealand (Bishop & Glynn, 1999)
Māoritanga	Māori culture, Māori perspectives (Bishop & Berryman, 2006)
Pākeha	a non-Māori of European descent (Bishop & Glynn, 1999)
pono	truth, valid (Ryan, 1997)
tautoko	to support (Ryan, 1997)
te reo	the language (Bishop & Glynn, 1999)
teina	younger or less experienced or skilled, younger peer or tutee (Bishop & Berryman, 2006)
tika	correct, accurate, valid, authentic (Ryan, 1997)
tikanga	cultural pattern, custom, obligations and conditions (Bishop & Glynn, 1999)
tuakana	older or more experienced and/or skilled (Bishop & Berryman, 2006)
tuākana	as above, macron denotes plural form (Bishop & Berryman, 2006)
whakamana	authorise, empower, enable, give boost, confirm, warrant (Ryan, 1997)

whakatauāki	proverb (Ryan, 1997)
whakawhanaungatanga	literally, the process of establishing relationships in a Māori context (Bishop & Berryman, 2006)
whānau	literally means the extended family (Bishop & Glynn, 1999)
whanaungatanga	relationship (Bishop & Berryman, 2006)
whare wānanga	university, school of higher learning (Ryan, 1997)

MAP OF THE TRIBAL AREAS OF NEW ZEALAND:

Gisborne is situated in the Tairawhiti region



Boundaries are from a variety of sources referred to in extract 13.2 of the Atlas of New Zealand Boundaries date of information June 1988
The boundaries are based on knowledge only they have no official standing

http://www.library.auckland.ac.nz/subjects/maori/guides/iwi_map.htm

CHAPTER 1: INTRODUCTION

Ko te kai a te Rangātira he kōrero

The food of leaders is oratory

(Whakatauki cited in Dewes, 1975, p. 75)

This research focuses on improving the oral language development of children attending mainstream schools in low socio economic areas who are making poor progress in literacy because of low performance in oral language. This is a particularly challenging task for Māori children. Due to the continued impact of past educational policies and the subsequent interruption of the intergenerational transmission of the mother tongue, many Māori children are not consistently exposed to proficient and fluent models of spoken English, or of spoken Māori, in the case of students learning in Māori medium contexts. Such children struggle to make the literacy progress expected of them by schools and communities.

This research project assisted non-Māori teachers to implement inclusive culturally-responsive learning strategies, such as *ako* (learn, teach)¹, and peer tutoring with trained tuākana (seniors) tutoring their teina (juniors) in order to provide opportunities for their teina to “talk more”, and build their conversation skills by engaging in natural and culturally relevant conversations in responsive contexts. Teachers were assisted in this work through a set of procedures known as TALES (an acronym for T: Talk; A: Ask; L: Listen; E: Encourage; S: Say). These procedures offer a different approach to oral language assessment, within conversational contexts, that provides better information than tools currently available to teachers. While useful for measuring global progress over a period of time, the tools currently available provide little insight into how teachers might promote children’s natural conversational skills. Listening to taped conversations of tuakana–teina students learning to use TALES, facilitates formative assessment through promoting teacher and student reflection and ‘power sharing’ relationships, as well as informing teachers of students’ oral language performance.

¹ Further discussion following

Context

The context of this research study is Gisborne (Tūranga-nui-a-Kiwa), a small provincial city on the East Coast of the North Island of New Zealand (Aotearoa). Gisborne is unique in that it has the highest proportion of Māori and Māori language speakers in New Zealand (Te Puni Kokiri, 2001). At 1 July 2003, Māori represented 60% of the student population within the Gisborne region (Ministry of Education, 2003a). (It should be noted that the geographical boundaries of the 'region' defined might differ in other sources). The significance of these statistics is apparent when the 2001 Census of New Zealand data informs us that Māori are a minority group making up only approximately 14% of the total 'Usually resident' population of New Zealand (Peddie, 2003). The majority of the population in New Zealand (approximately 72%) is made up of non-Māori or Pākeha as they are usually called. Pākeha are mainly descendants of the European settlers who colonised New Zealand in the nineteenth century. The remaining 14% of the population are mainly of Pacific Islands or Asian descent.

The national educational statistics suggest that Gisborne is also unique for its over representation of educational underachievement, with Māori learners being most at risk, by mainstream education standards, in terms of "low participation" and "low achievement" (Education Directions Ltd, 1999, p. 8).

New Zealand literature clearly identifies that the New Zealand schooling system, which has been dominated by European/Pākeha perspectives for more than a century, has not performed well for Māori and Pasifika students (Alton-Lee, 2003; Berryman & Glynn, 2003; Bevan-Brown, 2003; Bishop, 1999; Bishop, Berryman, & Richardson, 2001; Bishop, Berryman, Tiakiwai, & Richardson, 2003; Bishop & Glynn, 1999; Cazden, 1990; Glynn & Berryman, 2003; Hamilton & Moore, 2004; Hattie, 2003; Macfarlane, 1997, 1998, 2002, 2004; Metge & Kinloch, 1978; Ministry of Education, 2003b; Peddie, 2003; Spolsky, 1987). An increasing number of suspensions and expulsions of young Māori in mainstream primary schools is reported (Macfarlane, 2004, 2007). Typically, explanations of underachievement of minority ethnic groups have been paralleled by deficit theorising, usually by members of the dominant majority ethnic group. Deficit theorising attributes the underachievement to deficiencies within the individual, their language, their families, and culture (Glynn, 2003). However when

sociopolitical issues, such as power imbalances between the dominant majority group and the minority group are considered, it is also apparent that the resulting teacher/student interactions in the classroom, and the school and school community relationships are major causal factors of underachievement. (Alton-Lee, 2003; Bevan-Brown, 2003; Biddulph, Biddulph, & Biddulph, 2003; Cazden, 1990; Corden, 2000; Gay, 2000; Glynn, 1998, 2003; Hamilton, Anderson, Frater-Mathieson, Loewen, & Moore, 2003; May, 2001; Metge, 1990; Spolsky, 1998; Spolsky & Shohamy, 2000)].

Concern about the dominance of European/Pākeha world views in education leads to the question of whether it is safe and appropriate for a researcher who is non-Māori to investigate these issues. Bishop (1996, p. 18) suggests that one “reason why non-Māori should be involved in this area of research is simply that for Pākeha researchers to leave it all to Māori people is to abrogate their responsibilities as Treaty partners.” Bishop also suggests that it needs to be acknowledged that the researcher is personally involved in the research process, and that attempts to show an objective distance to the topics in question limit the potential of the research process. He refers to Heshusius’s suggestion that researchers need to acknowledge their participation and develop a “participatory consciousness” (Bishop, 1996, p. 27). Bishop asks:

How can racism be addressed unless those who perpetuate it become aware through a participatory consciousness of the lived reality of those who suffer? How can the researcher become aware of the meaning of racism if they perpetuate an artificial ‘distance’ and objectify the ‘subject’, dealing with issues in a manner that is of interest to the researcher, rather than of concern to the subject?

(Bishop, 1996, p. 28)

In the interests of demonstrating the ‘participatory consciousness’ that Bishop (1996) suggested is necessary, it needs to be acknowledged that this research project has been initiated by a non-Māori (Pākeha), ‘middle-class’, middle-aged woman who was born and bred in the heart of rural Southland. I am a fifth generation descendent of early settler Scottish shepherd stock who arrived on the *Palmyra*, at Port Chalmers, in 1858. I am somewhat embarrassed to admit ignorance, until middle age, of the fact that the area of Southland that is considered ‘home’ is also known as Murihiku, Kati Māmoe tribal country. This ignorance of Māori culture, place names, and history from a Māori perspective is unfortunately

all too common among non-Māori, and reflects the education they received delivered from the dominant culture's perspective.

As part of the dominant majority culture, in an area that had very few Māori people to challenge the 'Pākeha world view' it was easy to believe the 'fact' that Captain Cook was the 'first' to discover New Zealand. It was also easy to believe without question the myth that New Zealand had, apart from a few 'Māori wars' early on in the piece, largely avoided the usual negative impact of colonisation through the signing of the Treaty of Waitangi. It was easy to believe the myth that 'he iwi tahi tātau' - 'we are all one people' as William Hobson is reported to have declared at the Treaty's signing (May, 2001). The attitude that 'we are all one people', who should all be treated the same, continues to be promoted in the political arena, for example Brash, (2004).

The belief in the myth was shaken a little after I moved to Gisborne. As a second year teacher placed in a school in a low socio economic status (SES) area, with 100% Māori students, the first question asked of me was "Are you Māori?" My response "Does it matter?" clearly reflected the 'We are all one people' perspective. The five-year-old who had asked the question accepted this response in good faith and responded "No, I suppose not. My papa is a Pākeha." Not only was the myth perpetuated - the child, and his classmates, were exposed to a quick dismissal of the importance of their Māoritanga (Māori culture, Māori perspective). That this very first discourse is remembered so vividly more than twenty years later indicates that the question had been unsettling. Indeed it fostered the first real reflections that there was more to the myth than met the eye. It obviously did matter to the child whether the new teacher was Māori or not, because there wouldn't have been much point in asking the question if it didn't. More than twenty years on and the need to explore the ramifications of this question continue. Why did it matter?

It is evident that this is a central question that needed to be explored in order to inform this research project, particularly when considering that the majority of teachers in Gisborne mainstream schools are non-Māori. What part does the dominance in the New Zealand education system of the 'Pākeha world view' (Bishop, 1996) play in the choice that many young Māori take to opt out of the

education provided in regular classrooms? What role does it have in the over representation of Māori in special education, particularly in the large number of behaviour referrals that is noted by Macfarlane (1997) and particularly within the Gisborne context (Education Directions Ltd, 1999)?

The majority of teachers in New Zealand schools are non-Māori and mono-cultural (Macfarlane, 2004). It is evident in the literature that there has been a strong call for them to consider culture and to provide culturally responsive contexts for learning (Alton-Lee, 2003; Bevan-Brown, 2003; Bishop & Glynn, 1999; Education Review Office, 2002, 2003; Glynn, 1998, 2003; Glynn, Berryman, Atvars, Harawira, Walker, & Kaiwai, 1997; Hamilton & Moore, 2004; Hingangaroa Smith, 1998; Macfarlane, 2004; May, 2001; McCaffery & Tuafuti, 2003; Metge, 1990; Metge & Kinloch, 1978; Walters, Phillips, Oliver, & Gilliland, 1993). And so the question arises, how should non-Māori educators from the dominant group, respond to this call?

Macfarlane (2004) suggests that “It is not so much cultural compatibility that is required in diverse classrooms – it is cultural connectedness that counts” (Macfarlane, 2004, p. 84). While there is considerable research literature that can inform educators of ways to transform traditional pedagogy so that it better meets the needs of all students (Ladson-Billings, 1995, 2006; Neito, 1999), there continue to be issues in New Zealand regarding the delivery of education to Māori children in mainstream settings (Bishop & Glynn, 1999; Cazden, 1990; Macfarlane, 2004; Tuuta, Bradnam, Hynds, Higgins, & Broughton, 2004).

With the advent of the principles of inclusive education in the New Zealand Special Education 2000 policy (Ministry of Education, 1996a) teachers are required to provide appropriate programmes for all students. While it seems possible that the move toward inclusion may be instrumental in closing the gap between special education and general education (Macfarlane, 2004), it is apparent that there are a number of ‘dilemmas of inclusion’ for bilingual students, and Māori students in mainstream classes, particularly in the area of assessment (Cummins, 2000). There is the danger that mere physical inclusion of minority students may in effect become ‘submersion in the mainstream’ if the requirement of inclusion to meet the needs of all students is understood by the dominant

culture as treating all children the same (Glynn, 2003). This reinforces the need for teachers to be engaged in dialogue about the development of effective and inclusive culturally responsive programmes, and to access support to implement such programmes. Teachers need to experience how they can successfully improve the learning of students from minoritised cultural groups.

I have more than twenty five years of experience as an educator. Most of my teaching experience has involved teaching in new entrant and junior classrooms in low decile schools in Gisborne, including several years as a reading recovery teacher, before becoming an Itinerant Resource Teacher Special Needs (RTSN), then Resource Teacher Learning and Behaviour (RTLB), an Itinerant Teacher of the Deaf, and more recently a special education teacher at Gisborne Intermediate School. These years of classroom teaching and resource teaching training and experience have led me to develop a deep interest in cultural socio responsiveness and inclusive education. My experience has led me to agree with the literature which suggests that when children feel valued, are included in decision making about their learning, and are having fun while they engage in learning activities, they are far more likely to be open to learning.

The impact of oral language on literacy achievement has been another area of great interest to me. Many new entrant teachers have identified the challenges which children with low oral language vocabulary have when they are learning to read and write. However, there has been a scarcity of assistance and resources in this area, as 'most' children according to the Ministry of Education (2007a) enter school with a secure base of oral language to draw on when they reach school.

As an 'older' mother of a young child who has experienced challenges communicating orally I have learned first hand the distress that can be created by being told "We need to make a referral to Group Special Education." There is a perceived underlying message that there is some deficit within my child. For an educator who has specialized in the field of special education this was an enlightening experience. I resisted the recommendation for referral and trusted my instincts, as well as my professional knowledge and understandings, that my son was learning other things, and that clarity of speech would happen in due course (and it has). I also understood that drawing was his main mode for communication

with people outside of his family at that time, and that the problem as he explained it was “some people don’t listen very well to me mum”. He was reserved by nature, and took time to warm to people. They had to earn his trust. Sometimes instead of giving children time to be themselves in new settings we rush to intervene, to get them ‘fixed’ if they don’t immediately fit in with what we expect that they ‘should’ be doing, when in reality the individual children need time to be able to relax, and to be listened to, so that they may express who they are and what they know in a safe and responsive environment. A very appealing notion is that of developing a culture of care through relationship building conversations within which children relax and learn in inclusive contexts.

The TALES programme

‘TALES’, an acronym for ‘Talk’, ‘Ask’, ‘Listen’, ‘Encourage’, ‘Say’, is an inclusive socio-culturally responsive peer tutoring procedure developed by Grant (2002). TALES incorporates the six conditions for optimal input for language acquisition to occur in conversations, described by Krashen (1987). TALES has been designed to incorporate additional ‘best practice’ guidelines from the literature, with a specific focus on the usefulness of five minute probes of audio taped conversations as a tool for formative assessment during learning conversations between tuākana and key teachers. The methodology and execution of this study was designed to address the major issues and concerns identified from a wide ranging review of the literature in the areas of Māori and non-Māori power relationships in New Zealand education, the links between language and culture, the need for culturally responsive pedagogies, the need for better oral language assessment procedures, the role of collaborative conversations in developing oral language fluency, and peer-tutoring (tuakana – teina) as a key pedagogical strategy for implementing the TALES programme.

CHAPTER 2: LITERATURE REVIEW

Literacy issues and challenges

Socio political issues

May (2001) reminds us that education cannot replace the work of society. Glynn and Berryman (2003) refer to the considerable body of literature that supports the assertion that when education is developed by the dominant culture, the beliefs and practices of the indigenous minority are often ignored or belittled, leading to political and economic marginalisation of the minority culture. The exclusive use of the language of the dominant culture in education creates a powerful framework for the assimilation of the indigenous culture and their language (Cummins, 1981, 1996, 2000). Cummins cites Wagner (1991) and his terms *illiteracy of oppression*, and *illiteracy of resistance*:

Illiteracy of resistance, although caused by oppression, is to some extent instituted by the minority group itself which, wishing to safeguard its language and culture, and fearing assimilation, turns in on itself and rejects the form of education imposed by the majority group. At the extreme, the minority group would prefer to remain illiterate rather than risk losing its language. The group will cultivate the spoken word and fall back on the oral tradition and other components of its culture. By contrast, illiteracy of oppression is a direct consequence of the process of integration / assimilation at work in the public school and in the entire society; it results in the slow destruction of identity and of the means of resistance in the minority community; thus, it is brought about by the oppressive action of the majority society. (1991: 44-45; my translation)

(Cummins, 2000, p. 41)

The impact of assimilation on indigenous cultures is well documented in the national and international literature, as is the importance of considering the contextual and cultural needs of students and whānau. (Banks, 1989; Barnard, 2003a; Bevan-Brown, 2003; Biddulph et al., 2003; Cazden, 1990; Durie, 1994; Fraser, 1995; Gerzon, 1992; Glynn & Berryman, 2003; Glynn et al., 1997; Glynn & Bishop, 1995; Hamilton & Moore, 2004; Haworth, 2003; Hingangaroa Smith, 1998; Kana & Harawira, 1995; Ladson-Billings, 1994; Lynch & Hanson, 1992; Macfarlane, 1997, 1998, 2007; McCaffery & Tuafuti, 2003; McKinley, 2002; Metge & Kinloch, 1978; Ministry of Education, 2003b; Neito, 1999; Noordhoff & Kleinfeld, 1993; Orange, 1988; Price, 1990; Ritchie, 1992; Shameem, 2003; Walters et al., 1993)

In the New Zealand context, Pihama, Smith, Taki, and Lee, (2004) explore the literature that considers traditional Māori pedagogy and state that:

Knowledge has always had a central place within *Māori* society and the complexities of knowledge and knowledge transmission recognized in the structures of the *Whare Wānanga*. *Kaupapa Māori* is, Tuakana Nepe (ibid) argues, the conceptualization of *Māori* knowledge transmitted through *te reo Māori*. The centrality of *te reo Māori* is critical in understanding traditional *Māori* pedagogies. *Māori* knowledge has been formed, shaped, constructed and transmitted through an oral tradition. Maori Marsden (1988) relates a notion of the '*kupu*' (word) as the '*kākahu* of sound', the cloak or garment of sound. Sound and vibrations are critical to the transmission of knowledge and can be heard and felt within *te reo Māori*.

The centrality of *te reo Māori me ōna tikanga* is voiced powerfully by Rangimarie Rose Pere;

There is one truly great treasure among us *Māori*, no matter which tribe, sub-tribe, or family, and that is our chiefly language. The language which came from *Rangiātea*, the highest heaven of the far-flung heavens, down to earth, was planted here, and thereafter since it was first uncovered in the soil, it was grown, it was cherished, it was nurtured, it was cared for, it grew. Then from its growth, it gradually spread its sweet scent to every corner of the universe of the ancients. This chiefly language has its own spirit of inherent wisdom, it is communication of the abstract, in order that outsiders might not understand its hidden depths. The problem at this time is there are many *Māori* who do not know its depths, or the breadth of the language (Pere, R. 1999 3-10).

(Pihama et al, 2004, p. 21-22)

It seems more than likely that the process of colonisation and the subsequent assimilation has contributed to the current situation where a significant proportion of the *Māori* community do not speak *Māori* or have a full understanding of *Māori* tikanga, the traditional cultural custom, knowledge and practices of the *Māori* people (Glynn & Berryman, 2003; Glynn et al., 1997; Tangaere, 1997). Berryman and Glynn (2003) state:

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

(Berryman & Glynn, 2003, p. 77)

Spolsky (1987) when asked to report on bilingual education in New Zealand identified that:

It is seldom if ever the case that children come to school speaking the variety of language that is the chosen goal of the school system. Generally, they learn at home a completely different variety, often a different language, or a quite different dialect. This fact serves to set up a language barrier to education.

(Spolsky, 1987, p. 8)

Bishop et al., (2001) refer to the ‘Kaweata te Rongo’ study (Berryman, Glynn, Walker, Reweti, O’Brien, 2001), that gathered evidence about the diversity of Māori students’ language backgrounds who enter Māori medium settings at the age of five. Their findings are demonstrated in Table 1:

Table 1

Range of Students Entering Māori-medium at Five

4	Pre-schoolers who mainly communicated with mainly poor English or Māori structures and vocabulary.
3	Pre-schoolers who are communicated with only in English
2	Pre-schoolers who are communicated with mainly in English but with some Māori.
1	Pre-schoolers who are communicated with mainly in Māori

(Bishop et al., 2001, p. 22)

The majority of students were reported as coming from Groups 2, 3, and 4 and defined as ‘elective bilinguals’ (Bishop et al., 2001). While warning of the dangers of Group 3 students being mistakenly treated as ‘remedial’ learners, Bishop et al., (2001) also report that the study found that Group 4 was a small group of students with poor communication skills and state:

These students used a combination of both languages poorly constructed or formed. Such students are more problematic and require closer assessment attention in order to make decisions about appropriate individual programming.

(Bishop et al., 2001, p. 24)

McNaughton (2002) identifies the literacy and language challenges Māori children experience in mainstream schools and states:

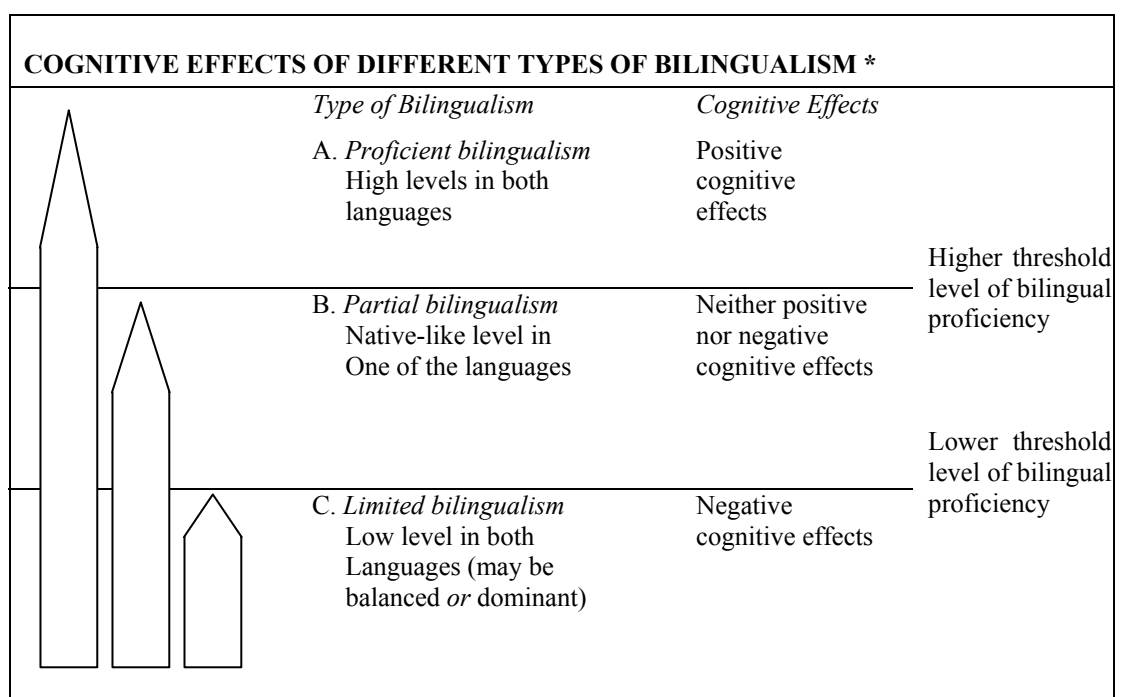
In New Zealand, literacy instruction is commonly regarded as very effective, and clearly it is, at least by international standards [Footnote: Elley 1999]. However, there are groups of students who make relatively low levels of progress in developing literacy. They are mainly indigenous Māori children and children from Pacific Island’s immigrant families, particularly those in schools serving communities with the country’s highest unemployment and lowest income levels.

At entry to school, when the literacy and language skills usually associated with success in schools are measured, there are already differences between these groups of children and other groups [Footnote: Gilmore 1999]. Some differences, such as in recognising letters and knowledge of letter and sound relationships, reduce. Others, such as word knowledge, writing vocabulary, and text reading level, develop and increase over the first year.

The differences become even more noticeable after four years. Substantial differences have developed in reading, particularly in comprehension of different types of texts, and in writing. Similar patterns of difference occur in other countries ... The widening gap in the measures of literacy parallels the gap existing between the minds of these learners and their teachers.

(McNaughton, 2002, p. 15)

(Bishop et al., 2001) suggest that comparing Māori in mainstream and Māori in Māori-medium programmes using the same criteria is unjustified and educationally flawed. However, it does seem reasonable to conclude that some Māori students entering mainstream settings might be described as what Cummins (1981) initially described in the ‘Threshold Hypothesis’ as “semilingual” or having “limited bilingualism” (See Figure 1). Cummins suggests that “if bilingual children attain only a very low level of proficiency in one or both of their languages, their interaction with the environment through these languages both in terms of input and output, is likely to be impoverished” (Cummins, 1981, p. 38).



* Adapted from Touomaa and Skutnabb-Kangas, 1977, p. 29.

Figure 1: Cognitive effects of different types of bilingualism (Cummins, 1981, p. 39)

MacSwan (2000) cites others, and challenges the validity of the ‘Threshold Hypothesis’, accusing Cummins of fostering deficit attitudes, and lowering teachers’ expectations of children’s abilities in the classroom. Spolsky (1984) is critical of Cummins’ use of terminology such as “proficiency” and “academic” that carry value judgments with them. Certainly concerns around deficit theorising are still valid today as theorists continue to promote cultural deficiency explanations for Māori non-participation in education (Bishop et al., 2001). The deficit approach tends to hold individuals and/or their culture responsible for ‘failure’ to perform at the expected level or as the accepted ‘norm’ suggests that they should, rather than

being a reflection of environmental and sociopolitical factors. Bishop et al., (2001) cite Nash (1993) as an example:

Nash (1993) (supported by Chapple, Jefferies and Walker, 1997) concludes that *family resources both material and cultural, are the big transmission mechanisms of educational disadvantage rather than the structure of the education system* (Nash 1993 p. 124)

(Bishop et al., 2001, p. 5)

There is a danger that arises from uncritical understandings of this kind of research, and that is that the findings can lead the focus away from improving curriculum and pedagogy for these students, and settle instead on ‘accepting’ that there is little that schools can do for them. Such a position can preclude pedagogical change and development.

The ‘Threshold Hypothesis’ was developed in a time when deficit theorising, although being questioned, was still accepted as the norm, and to some extent the terminology and concepts explored within the ‘Threshold Hypothesis’ reflect the deficit approach. However, Cummins has gone to some lengths to respond to the controversy that has surrounded the term ‘semilingualism’ and to clarify his intentions regarding the threshold hypothesis in general (Cummins, 1994, 2000; Rivera, 1984). He acknowledges that the ‘semilingualism’/‘limited bilingualism’ construct has no theoretical value and has tended to confuse rather than clarify the issues. He states:

The fact that the term ‘semilingualism’ potentially stigmatizes the victims of inappropriate schooling and coercive power relations in the society is good enough reason to drop it from the lexicon. However, we are still left with the reality that many subordinated group bilingual students tend to gain less access to literate/academic registers in both L1 and L2. The real issue is how do we challenge the coercive social and educational structure that gives rise to this pattern.

(Cummins, 2000, p. 105)

Spolsky (1984), although critical of Cummins’s use of the acronyms L1 and L2, suggesting that they create ambiguity around what is meant by a first or second language, applauds Cummins’s willingness to desist from using the ‘old terms’. Cummins acknowledges that the “relationships between L1 and L2 do not operate independently of the sociocultural context” (Cummins, 1981, p. 34) and explores the characteristics of minority groups that tend to perform poorly in second language -only school situations and suggests that:

...whether English or a minority language is used in the home is, in itself, relatively unimportant for students' academic development. As Wells' (1979) study has shown, what is important for future academic success is the quality of interaction children experience with adults. Viewed from this perspective, encouraging minority parents to communicate in English with their children in the home can have very detrimental consequences. If parents are not comfortable in English, the quality of their interaction with their children in English is likely to be less than in L1. Thus, the lower academic achievement of minority children who used L2 exclusively with their parents and friends in Bhatnagar's (1980) and Chesarek's (1981) studies may be attributable to the lower quality of communication their parents were capable of providing in their second language.

(Cummins, 1981, p. 33)

While this could possibly be construed as 'blaming the parents' and fostering deficit attitudes, it is important to consider the impact of past government educational policies and language practice reflecting the 'subtractive bilingual approach' in New Zealand. Families were encouraged to speak 'English only' at home and school, with the addition of corporal punishment reportedly used to enforce the English only policy. It is not difficult to understand how the subsequent interruption of the intergenerational transmission of the mother tongue (Spolsky, 1998), has had an accumulative impact on Māori achievement in mainstream schools.

Cummins' goes further when exploring the sociocultural characteristics of minority groups that tend to perform poorly in second language - only school situations and demonstrates an ecological perspective in the suggestion that:

... schools have contributed directly to minority children's academic difficulties by undermining their cultural identity, attempting to eradicate the L1, and exposing them to incomprehensible context-reduced input in English. Recent evaluations of bilingual education, however, have shown that when schools reinforce minority children's cultural identity, promote the development of the L1 communicative proficiency children bring to school, and make instruction comprehensible by embedding it in a context that is meaningful in relation to students' previous experience, then minority students experience academic success and develop high English literacy skills, in spite of sociocultural impediments.

(Cummins, 1981, p. 36 - 37)

MacSwan (2000) cites Cummins' (1984) rejection of the characterisation of semilingualism as a deficit theory because the 'condition' is hypothesised to result from a social situation that facilitates the loss of language. In response to those who suggest that situations of language loss due to colonisation are relevant to the semilingual thesis, MacSwan (2000) observes that:

Language loss occurs when, under certain conditions of language contact, a family's heritage language dies out and is replaced by a socially dominant

one. This may occur as a result of immigration or colonization. Although it is admittedly a sad occurrence when social and political events lead to heritage language loss (sometimes even language extinction, as in the case of some indigenous languages in the United States and Mexico), the phenomenon does not provide evidence for semilingualism.

We may think of language loss as either an event in the life of a society or an individual. With respect to societal bilingualism, it may be conceptualized as the result of language shift, a process that involved a generational switch in language use. Here, a family or community begins life as monolingual speakers of a minority language, then some members become bilingual over the course of time, generally in the second or third generation. In situations where use of the minority language is highly stigmatised, some community members may become “covert bilinguals” who deny knowledge of their heritage language, or find it progressively less useful in the larger society as most topics in daily life become more familiar in the socially dominant language. Thus, members of subsequent generations often become monolingual again, this time in the majority language.”

(MacSwan, 2000, p. 27)

This apparently ‘how sad, never mind’ attitude and description of language loss as an ‘event’ doesn’t give due consideration to what is happening for the children involved during the *process* of ‘generational switch’. Nor does it consider the psychological impact that loss of language and cultural identity might have on the culture, both collectively and on an individual level, as has been identified in the literature (Barnard, 2003b; Macfarlane, 1997). Cummins (2000) suggests that:

Underlying the educational arguments of many bilingual education advocates was the conviction that a history of oppressive power relations was a significant contributing factor to bilingual students’ underachievement. For many generations, bilingual students had been punished for any use of their L1 in the school context and were discriminated against in virtually all areas of education, from segregated schools to biased curriculum and assessment practices. Schools traditionally had communicated a sense of shame in regard to children’s language and cultural background rather than a sense of affirmation and pride. Thus some genuine recognition or institutionalisation of children’s language and culture in the schools was a prerequisite to reversing this legacy of coercive power relations...We need to ask questions such as: Why is it that underachievement tends to characterise social groups that have experienced long-term devaluation of their identities in the broader society much more than social groups that have immigrated to the host country more recently?

(Cummins, 2000, p. 33)

Glynn (1998) suggests that New Zealand educators appear to accept the need for refugee and migrant groups within New Zealand schools to have their language and cultural practices recognized but may be ‘slower’ to recognize that these are just as crucial for indigenous Māori.

Bishop and Glynn (1999) stress that the “pattern of dominance and subordination and its constituent classroom interaction patterns (pedagogy) perpetuates the non-participation of many young Māori people in the benefits that the education system

has to offer” (Bishop and Glynn, 1999, p. 131). Pihama et al., (2004, p. 8) state that “The marginalization of *Māori* has meant the privileging of *Pākeha* knowledges over *Māori* knowledges. This privileging originates from processes of colonization and the imposition of colonial institutions. The existing education system is but one of these institutions”. Pihama et al., (2004) go on to cite Smith (1997, p. 273) and state:

...transforming the mode and the institution is not sufficient. It is the political context of unequal power relations that must be challenged and changed. In short *Kaupapa Māori* strategies question the right of *Pākeha* to dominate and exclude *Māori* preferred interests in education, and asserts the validity of *Māori* knowledge, language, custom and practice, and its right to continue to flourish in the land of its origin, as the *tangata whenua* (indigenous) culture. *Kaupapa Māori* thus challenges, questions and critiques expressions of dominant *Pākeha* hegemony.

(Pihama et al., 2004, p. 10)

Macfarlane (2004) refers to the impact that the dominant culture’s assertion that “all children are the same” has had on what has been called the ‘psychology of mana’. McNaughton, Phillips, & MacDonald (2000) report that teacher expectations are often lower for *Māori* children. Macfarlane (2004) cites a study by Steele (1992) that identified the stigma that arose from an assumption of intellectual inferiority by teachers and peers, and the demands they constantly faced to “prove themselves” at school. Macfarlane also cites Ritchie (1963) and states:

Often frustrated, the child says, in effect, “I am *Māori*, *Māori* is bad, I am bad; and the *Pākeha* (European) world confirms this judgment later on” (Ritchie, 1963, p. 183).

These trains of thought imply that coming from a minority or indigenous culture into a mainstream school constitutes a *deficit* in terms of school expectations, and that there is a deficit association between ethnicity, academic performance, and behavioural responses. This reinforces the central role of schools in explaining or accounting for the underachievement of *Māori* students, who may be judged at risk because of their ethnicity. Hamilton (1992) argues that many *Māori* children have a different outlook on life from the non-*Māori* children around them. Many teachers and schools ignore this, either intentionally or unintentionally by asserting they are “treating all children the same” (Hamilton, p. 55). When the powerful dominant culture asserts that all children are the same, there is a real danger that individual differences, cultural identities, and culturally preferred values and practices will be marginalised or ignored. This has been the outcome for many *Māori* over more than a century of state education in New Zealand.

(Macfarlane, 2004, p. 12)

Huata Holmes, in discussion with Russell Bishop (1996) about a range of *Māori* community concerns regarding their children’s education, reinforces the importance of mana *Māori*:

The mana *Māori* is an essential element that all Board of Trustees, caregivers, children themselves, should be made aware of. It enhances the *Māori* child’s ability to achieve, it enhances the *Māori* child’s self esteem and it also

enhances the chances of that Māori child through achieving self esteem, to become a better citizen, a better New Zealand citizen, to help his Pākehā brothers and sisters as well. The language is the operating key, because mana Māori is so important that the pedagogues have to realise that it is the language that is the vehicle for the culture to flourish, in fact the language is the true culture. Culture stems from the language and the language stems from the culture as well; so they are intertwined.

(Huata Holmes cited in Bishop, 1996, p. 87 – 88)

A discussion document designed to inform the development of a New Zealand language policy, recommended that bilingualism should be promoted for all New Zealanders (Waite, 1992). It was suggested that learning Māori as a second language would contribute to “cross-cultural understanding and social harmony” as well as increasing student ability to develop other languages (Waite, 1992, p. 7). Although by 1993, the proposed development of a national language policy was abandoned by the New Zealand government (Peddie, 2003) there has been a remarkable revitalisation of the Māori language in recent times (May, 2001; Peddie, 2003). The principles of partnership, protection and participation, embedded in the Treaty of Waitangi, a foundational document recording a collaborative agreement between Māori and the Crown, imply that the state educator system should provide an environment where Māori children are able to access and learn their own language.

However, although there is considerable evidence supporting the effectiveness of bilingual approaches to education (Bishop et al., 2001; Cummins, 1981, 1993, 1994, 1996, 2000; Glynn, 2003; Krashen, 1996; Ministry of Education, 2007b; Peddie, 2003; Rivera, 1984; Spolsky, 1987, 1996, 1998), and although there are available an increasing number of bilingual and bicultural education settings that attempt to provide culturally appropriate and responsive contexts for learning (Maori Language Commission, 2004; Peddie, 2003), it is evident that the majority of Māori continue to attend mainstream education settings that reflect the dominant majority perspective (Macfarlane, 2004; Peddie, 2003). Tuuta et al., (2004) state:

The underachievement of Māori students in mainstream settings has been a priority of government, particularly given that over 85% of Māori students are currently in the mainstream or general school system rather than in Kura Kaupapa or other Māori medium settings. Research has revealed that mainstream teachers have had lower expectations of Māori children, have failed to effectively identify or reflect on how their practice impacts on the educational experiences of Māori students, and have had limited support to address these specific issues.

(Tuuta et al., 2004, p. vii)

Tuuta et al., (2004, p. ix) also refer to the “great debate” about what educational achievement for Māori students is, and the ongoing discussion about the need to develop effective data collection systems to assess Māori achievement.

When non-Māori undertake research concerning Māori students, regardless of whether these students are in mainstream or in Māori medium contexts, non-Māori need to consider carefully the procedures and methods they use. The Treaty of Waitangi, principles (partnership, protection and participation) need to underpin the choices made (Glynn, 1998). Wong (2006) notes that "Many Māori are suspicious of non-Māori researchers, as very seldom in the past have the results been used to validate what Māori were doing well" (p. 54). Cram (2001) argues that Non-Māori need to look “for research pathways that allow them to support Māori kaupapa” (p. 38). Macfarlane (1999) cites a whakataūāki (proverb) by Tawhiao (1858) when promoting bicultural approaches in education:

Kotahi te kohao o	The needle has but one eye
Te Ngira e kuhuna ai	But it can be threaded with
Te miro whero	Red cotton
Te miro ma	White cotton
Te miro pango	Black cotton

Tawhiao, 1858 (as cited in Macfarlane, 1999)

The present research study in mainstream schools included students that were non-Māori as well as Māori (the majority). All the teachers who participated were non-Māori. It was crucial that inclusive culturally responsive pedagogy was used to inform both the methods and procedures throughout the research.

Although it is argued that non-Māori cannot conduct kaupapa Māori research, Cram (2001, p. 38) expresses the view that "non-Māori can support a Māori research kaupapa"; in other words, they can support its development and ensure it happens in a way that works for Māori.

(Wong, 2006, p.53)

Various approaches to research with Māori people, identified as Kaupapa Māori Research Methodology (Bishop & Glynn, 1999) are relevant to this research study. Kaupapa Māori Research Methodology endeavours to create a power sharing process so that the power relationship between the researcher and research participants is reciprocal and reflects the Māori concept of ‘ako’. Kaupapa Maori Research Methodology can be aligned with some Western/European approaches to research as it involves participatory action research practices (Bishop & Glynn,

1999), and qualitative as well as quantitative research designs. Berryman (2007) suggests that participative inquiry, for example, is useful in that it allows a collaborative problem solving process to occur throughout the research.

Kaupapa Māori theory and Methodology support and promote ‘narrative’ approaches not only to research, but also to pedagogy, as a way to create power-sharing relationships in classrooms. The notion that individuals lead ‘storied lives’ which they bring with them to relationships, and that learning occurs through the process of storying and re-storying is the basis of narrative teaching approaches. Within narrative teaching approaches learning is considered to be the outcome of interactions (Bishop & Glynn, 1999). In the classroom, the narrative approach to teaching promotes co-construction of curriculum content through negotiation between students and their teachers. Teachers and students engage in focused conversations. Narrative pedagogy is an inclusive teaching and learning strategy designed to encourage the participation of all students irrespective of cultural or academic and social diversity (Bishop et al., 2003).

Sociocultural understandings

Sociocultural approaches to literacy learning have long been advocated (Glynn et al., 2006; Trent, Artiles, & Englert, 1998). Glynn et al., (2006) state:

Sociocultural perspectives on human learning emphasize the importance of responsive social and cultural contexts as key components of successful learning (Vygotsky, 1978; McNaughton, 1995; Gregory, 1996; Rogoff, 2003). Hohepa, Smith, Smith and McNaughton (1992) maintain also that the acquisition of linguistic knowledge and the acquisition of cultural knowledge are interdependent. Participation in structured social activities within a cultural context, where the users are active rather than passive participants in the process, enables the learner to acquire both linguistic and sociocultural knowledge. Ensuring that there are participants within the learning setting who have more expert linguistic and sociocultural knowledge will predispose or ‘prime’ a learning environment to promote meaningful social and cultural outcome [sic] for all (Hohepa et al., 1992; Rogoff, 2003).

(Glynn et al., 2006, p. 45)

Glynn et al., (2006 p. 48) cite Tharp’s four basic teaching and learning principles for supporting other language groups as a vehicle for providing a ‘solid foundation of culturally responsive and learning methods, for all learners, both those whose first language is the language of instruction as well as those who are second language learners of the language of instruction’. They go on to state:

Where students are able to bring their own prior experiences into the classroom learning context, the purpose of the activity is more likely to make sense to them. This is especially important when the cultural values and practices of the students are different from those of their teachers. Language learning needs to be experience-based and supported by opportunities for students to talk and engage with their peers and teachers. This can be achieved through the use of collaborative interactions and strategies (Bishop et al., 2003) such as story and song, modeling, providing supportive conversational scaffolds or frameworks, co-construction, and problem solving.

(Glynn et al., 2006, p. 49)

Cultural responsiveness

The call for non-Māori educators to consider culture and to provide culturally responsive contexts for learning has certainly been getting stronger (Alton-Lee, 2003; Bevan-Brown, 2003; Bishop & Glynn, 1999; Education Review Office, 2002, 2003; Glynn, 1998, 2003; Glynn et al., 1997; Hamilton & Moore, 2004; Hingangaroa Smith, 1998; Macfarlane, 2004; May, 2001; McCaffery & Tuafuti, 2003; Metge, 1990; Metge & Kinloch, 1978; Walters et al., 1993). While Gay (2000) refers to the common belief that “Good teachers anywhere are good teachers everywhere” and suggests that subscription to this belief is the failure to realise that notions of “goodness” are culturally determined, there is a growing understanding that ‘effective teachers’ provide culturally responsive education environments (Alton-Lee, 2003; Bevan-Brown, 2003; Biddulph et al., 2003; Bishop et al., 2001; Bishop et al., 2003; Bishop & Glynn, 1999; Education Review Office, 2002, 2003; Glynn, 1998; Ladson - Billings 1995, 2006; Macfarlane, 2004, 2007).

Bishop et al., (2001) reinforce that for change in achievement levels to be possible ‘good teaching,’ *and* a recognition that culture needs to be ‘central to the classroom,’ are required. They stress that the teacher needs to recognize how the learning environment is affected by their culture as well as how “students meaning making is facilitated” (p. 32).

The need for validated technologies, technologies that are proven to be significantly effective, is also identified (Hattie, 2003). Hattie suggests that:

We need technologies of practice, a shared commitment to that which truly works in teaching. Without it, we allow self-determination about what is effective teaching, and this is too variable. More important, if there is an absence of shared teaching excellence, then it is highly likely (as we are currently witnessing) that the void will be filled by personal views – such as

views that it is the home, the student that set the boundaries on what is attainable.

(Hattie, 2003, p. 12)

There are several examples of how teachers can provide culturally responsive education environments now available in the New Zealand context (Atvars, Stock, & Pinfold, 1999; Berryman & Glynn, 2003; Bevan-Brown, 2003; Bishop et al., 2001; Bishop et al., 2003; Bishop & Glynn, 1999; Education Review Office, 2002; Glynn, 1998; Hingangaroa Smith, 1998; Hohepa, McNaughton, & Jenkins, 1996; Macfarlane, 1997, 1998, 2004; McCaffery & Tuafuti, 2003; McKinley, 2002; Metge, 1990; Ministry of Education, 2002, 2003b; Ritchie, 1992; Tangaere, 1997; Walters et al., 1993).

Bishop et al., (2003) conclude that the most important influence on Māori students' educational achievement is the quality of the in-class face-to-face relationships and interactions between the teachers and Māori students. Macfarlane (2004) provides the 'Educultural Wheel' as a framework to inform teachers of the need for culturally relevant pedagogy that signals to Māori students that their culture matters.

Glynn (2008), commenting on Cavanagh's (2008) article 'Schooling for Happiness: Rethinking the Aims of Education' reminds us that:

Our students are presently in our schools not simply to be "prepared" for a future life and learning *after* school, but to participate in shaping a happy, safe, and satisfying life and learning culture *here* and *now*. ...

Key pointers to increasing the responsiveness of our educational aims and goals are found in Cavanagh's pleas for the central positioning of caring, respectful and inclusive relationships within classroom and school learning communities. These are the kinds of relationships that enable students both to "engage" in learning and to "belong" within learning contexts that are safe and supportive. Relationships within effective classroom and school learning communities are characterised by the affirmation and inclusion of the different cultural and social identities and knowledge bases that students bring with them into their classrooms and schools.

(Glynn, 2008, p. 14)

The Education Review Office strongly endorses the importance of cultural responsiveness in education (Education Review Office, 2002, 2003). It is interesting and heartening to note the encouragement for mainstream educators to look to minority Māori-medium researchers and educators such as those identified in Te Toi Huarewa (Bishop et al., 2001), for models of effective practice in a system that has been dominated by the majority.

The Education Review Office (ERO) (2002) report on schools that were considered to demonstrate good practice in the provision of education for Māori students and provided many examples of how schools and teachers can demonstrate cultural responsiveness. They state:

The New Zealand curriculum framework expects all schools to take into account Māori perspectives in delivering the curriculum. Effective schools see providing Māori perspectives as more than just fulfilling their obligations. They go beyond simply incorporating the odd Māori word into particular topics of study, and include substantial elements of traditional and contemporary Māori knowledge and culture into the curriculum. This way Māori knowledge and culture is affirmed and validated and demonstrates to both Māori and non-Māori students that Māori knowledge has a significant part to play in learning.

There is a danger that Māori knowledge is trivialised and may have unintended negative effects if insignificant snippets of Māori issues are the only ones incorporated into the curriculum. Schools which are succeeding for Māori incorporate Māori perspectives as an integral part of the school's operations. This is viewed as a mechanism for making their education relevant to the students and improving their self-esteem.

(Education Review Office, 2002, p. 8)

The following year, the Education Review Office (2003) reported on schools' performance in improving educational achievement of Māori students in mainstream schools. They stated that:

While a wide range of initiatives was being implemented by schools, the majority were cultural programmes and often did not have strong links with identified educational issues or underachievement. In addition, most schools were not able to determine or report if the initiatives they had implemented led to the improved educational achievement of Māori students Most schools are not currently evaluating the effects of their initiatives on Māori achievement. Therefore there is little information available about the quality or impact of these initiatives.

(Education Review Office, 2003, p. 1&4)

There has certainly been significant policy change, as part of national and international educational reform movements that has seen teachers inundated with calls to change their pedagogy. It is apparent that the notion of cultural responsiveness sits well within the principles of inclusion. Macfarlane (2004) refers to the apparent paradox of inclusive education that nevertheless requires separate space for the indigenous culture to thrive. It is crucial that this paradox be understood by New Zealand educators because the majority of Māori continue to choose mainstream education settings for their children. Inclusive programming is required to ensure that students from a variety of cultural and ethnic backgrounds can be successfully included and experience success in mainstream classrooms.

In addition, Gay (2000) stresses that to become culturally responsive significant change is required of teachers:

If the potential of culturally responsive pedagogy is to be realised, then widespread instructional reform is needed, as well as major changes in the professional development, accountability, and assessment of teaching personnel. It requires teachers who have (1) thorough *knowledge* about the cultural values, learning styles, historical legacies, contributions, and achievements of different ethnic groups; (2) the *courage* to stop blaming the victims of school failure and to admit that something is seriously wrong with existing educational systems; (3) the *will* to confront prevailing educational canons and convictions, and to rethink traditional assumptions of cultural universality and / or neutrality in teaching and learning; (4) the *skills* to act productively in translating knowledge and sensitivity about cultural diversity into pedagogical practices; and (5) the *tenacity* to relentlessly pursue comprehensive and high-level performance for children who are currently underachieving in schools.

(Gay, 2000, p. 44)

The literature suggests that the most effective way to challenge dominant majority beliefs is through collaborative dialogue combined with the demonstration of positive outcomes of programmes that incorporate ‘transformative’ (Cummins, 2000), ‘narrative’ pedagogy (Bishop & Glynn, 1999; Cummins, 2000).

Collaboration between teachers, students and their communities has been identified as an essential component of inclusive teaming (Andrews & Lupart, 1993; Friend & Cook, 1996; Hallahan & Kauffman, 1991). It has been established that the development of collaboration requires a major shift in practices, attitudes, and beliefs from a restorative perspective to a preventative perspective (Jordan, Kircaali-Iftar, & Diamond, 1993).

Te Kauhua/Māori in Mainstream (2004) pilot project was an “exploratory professional development pilot”. The project focused on “reframing the mainstream school experience for Māori students” and provided schools with the “opportunity, in partnership with their community, to explore professional development approaches that enabled teachers to improve outcomes for Māori students and work more effectively with Māori Whanau” (Tuuta et al., 2004, p. 1).

The Ministry of Education has, since 1998, been developing and refining a Māori Education Strategy, and in 2008 released ‘*Ka Hikitia – Managing for Success: The Māori Education Strategy 2008 – 2012*’ (Ministry of Education, 2008a). In the summary they state: “**Ka hikitia**’ means to ‘step up’, to ‘lift up’, or to ‘lengthen one’s stride’. Here, it means stepping up the performance of the education system

to ensure Māori are enjoying educational success as Māori.” The strategy builds on the “Maori potential approach developed by Te Puni Kōkiri [Ministry of Māori Development] in 2004 as the public policy approach for government” (Ministry of Education, 2008a, p. 19). The importance of knowing students and building on what they know and bring to the learning environment is stressed. ‘Ako’, with the underlying understandings that ‘culture counts’ and that ‘productive partnerships’ between students, whanau, and educators are required, is seen as key to realizing Māori education potential. There is an emphasis on ‘working together and sharing power’ with a refocusing from the deficit lens of ‘problems and failure’ to the positive lens of ‘making the most of opportunities for success’. By recognizing the potential of every Māori student, by perceiving ‘being Māori’ as an advantage, and by believing that all Māori learners are ‘inherently capable’ the deficit focused framework is diminished.

One of the four focus areas identified in *Ka Hikitia – Managing for Success* is the ‘Foundation Years’. The Ministry of Education state in the summary that:

It is essential to develop strong foundations for learning early in life to ensure longer-term success. To achieve this, *Ka Hikitia – Managing for Success* seeks to ensure that Māori children are:

- Participating in quality early childhood education
- Moving successfully into school
- Building strong literacy foundations in the first years at school

(Ministry of Education, 2008a, summary)

In the ‘Foundation Years’ section of ‘What will change’ in the summary of *Ka Hikitia – Managing for Success*, two of the specific goals and actions are particularly relevant to this research study:

Improving the transition to school for children and their whānau’, [and], ‘Focusing schooling improvement initiatives on literacy achievement in Years 1 to 4 in Decile 1 – 3 schools.’ [Including the development of] ‘an early years’ assessment tool for literacy learning in Years 1 to 4 to support teachers to set clear expectations of student progressions in literacy.

(Ministry of Education, 2008a, p. 31)

Oral language, literacy, and the role of conversations

There is a substantial body of research that demonstrates the relationship between talk, academic acquisition and achievement (Corden, 2000). Oral language is a key to further acquisition of literacy skills (Cambourne, 1988; Clay, 1998; Corden, 2000; Mercer, 2000; Ministry of Education, 1996b; Topping & Bamford,

1998; Vygotsky, 1962; Wells, 1987; Wells Lindfors, 1987). Glynn, Wearmouth and Berryman (2006) state “Students’ proficiency with spoken language affects the development of all other communication skills” (p. 57). The Ministry of Education (2003c) states:

It is well established, through studies and theories of language learning that oral language underpins written language. It is vital for children to listen and speak in order to develop a grasp of language. Through talking about events as they happen and discussing their ideas, children construct knowledge and awareness and acquire the language they need in order to make sense of their experiences. From their earliest years on into their school years, children benefit from many and varied opportunities to develop and practice oral language in their homes, communities and classrooms.

(Ministry of Education, 2003c, p. 1)

The vast majority of literacy research and theory in the primary education field in New Zealand tends to focus mainly on the acquisition of reading and writing skills (Grant, 2002). The Ministry of Education (2007c) developed the *Draft for Consultation Literacy Learning Progressions* document that is designed as a tool to show teachers “what knowledge and skills their students need to have developed at specific points in their schooling if they are to engage with the texts and tasks of the curriculum and make the expected progress” (p. 3). While the Ministry of Education (2007c) stress that “expertise in oral language is essential to learning the code, making meaning, and thinking critically” the emphasis is on the use of reading and writing to extend oral language (p.4). This is interesting in view of their earlier statement (Ministry of Education 2003c, p. 1) that “oral language underpins written language.” Also there is a clear expectation by the Ministry of Education (2007c) that the *majority* of children will already have a secure base of oral language to draw on when they reach school. They state in the draft ‘Literacy Learning Progressions’ that:

When they start school at the age of five, children will bring to their school learning the literacy foundations and the diverse knowledge and experiences that they have gained from participation in their various social and cultural contexts.

Children build their literacy knowledge through their experiences of spoken language in everyday life. When they start school, most children will: ... have a wide oral vocabulary of nouns and verbs and be able to use many adjectives and prepositions, particularly those relating to colour, shape, and size

(Ministry of Education, 2007c, p. 8)

It is interesting to note that the term “most children” might easily be understood as the ‘dominant majority’. Many Māori students in mainstream classrooms, in low socio-economic status areas, experience difficulties engaging in the language of

the classroom within which English is the predominant language (Alton-Lee, 2003). School Entry Assessment statistics indicate that the scores of Māori students for the ‘Tell Me’ assessment, involving the student retelling in their own words a familiar story, using the story book as a prompt, were significantly lower than the scores of Pākeha students (Ministry of Education, 2001).

McNaughton, Keegan, and, MacDonald (2006) place a high value on children’s vocabulary acquisition:

The development of vocabulary has wide linguistic and cognitive significance. International research has shown that there are important educational outcomes of the development of vocabulary. For example, the size of a child’s vocabulary prior to starting school has been shown to have a large impact on children’s reading comprehension at school and this impact continues into the school years.

(McNaughton et al., 2006, p. 79)

It is therefore very important to explore ways in which children’s vocabulary can be extended, particularly through the use of conversation.

Krashen (1987) when investigating language acquisition approaches, promotes providing opportunities for conversations to occur and describes six conditions that promote ‘Optimal Input’ for language to be acquired. The six conditions suggest that optimal input should:

- be comprehensible
- be interesting and relevant
- not need to be grammatically sequenced
- be in sufficient quantity
- not put the student on the defensive
- provide students with tools to help them improve their conversational management

Each of the conditions is explored in more depth: Krashen (1987), when considering the condition that optimal input is comprehensible, suggests that ‘Caretaker’ speech is roughly tuned, not *finely* tuned, to a child’s level of competence. Krashen (1987) recommends the development of comprehension checking strategies. Vygotsky (1962, p. 157) suggests that egocentric speech, a necessary stage of development preceding “inner speech” disappears when the

feeling of being understood, or listened to, “essential for social speech”, is established.

Krashen (1987), when discussing the condition that optimal input is interesting and relevant, suggests that optimal input focuses the acquirer on the *message* and not on form. Krashen states “It is very difficult to present and discuss topics of interest to a class of people whose goals, interests, and backgrounds differ from the teachers’...” (p. 67), and suggests that the provision of “extra-linguistic support” in the form of props is important (Krashen, 1987). The important role of play in the development of language and learning has been identified as far back as Plato and Aristotle (Cherry, 1976 cited in Cook, Tessier & Armbruster, 1987).

Krashen (1987) when discussing further the condition that optimal input is not grammatically sequenced suggests that roughly tuned “input plus 1” occurs automatically, in most cases, when the input is comprehensible and meaning is successfully negotiated. Krashen (1987, p. 70) also suggests that a grammatically based syllabus “reduces the quality of comprehensible input and distorts the communicative focus”, another problem is that it “attempts to guess the order of acquisition.”

Optimal input must be in sufficient quantity (Krashen, 1987). Students need a great deal more than five minutes talk to provide sufficient input. Rather than “over individualising” instruction it is easier to provide greater opportunities for comprehensible input (Krashen 1987). The limits on teacher time to engage in meaningful conversation with children are identified in the literature (Cazden, 1990; Clay, 1998).

When discussing the condition that optimal input should not put students on the defensive Krashen (1987) suggests that there is a need to keep the ‘affective filter low’ to make sure that the student is open to input. The use of procedures that are “true to the input hypothesis” and ensuring that the other characteristics for optimal input are in place will help satisfy this requirement (Krashen, 1987). Krashen (1987) suggests further that there may be issues around the students’ readiness to speak and that a silent period needs to be accepted. Error correction is strongly discouraged: “Error correction has the immediate effect of putting the

student on the defensive. It encourages a strategy in which the student will try to avoid mistakes, avoid difficult constructions, focus less on learning and more on form. It may disrupt the entire communicative focus of an exchange” (Krashen, 1987, p. 75). It is interesting to note in the New Zealand context Clay’s (1998, p. 25-26) suggestion that “Culture and context and the rules of conversation are very important, and little children have learned that before they come through the school doors. To some extent they are wary of using the wrong language in the wrong place or with the wrong person.” Pihama et al., (2004) suggest, when considering the principles of ‘tika’ (correct) and ‘pono’ (right) within a review of the literature on Māori pedagogy, that:

A question often asked is, ‘*kei te tika tēra?*’ or are you sure that is fully accurate and correct. The unspoken qualifications are; one needs to be quite clear and completely accurate before presenting something to say. These sanctions are reflections of the enormous importance Māori society places on oral literacy bearing in mind the prior discussions on *Te Reo me ōna Tikanga*. ... *Pono* is a term which denotes accuracy of form to function. Speaking is something done conservatively within *mātauranga Māori*. Doing is more readily perceived as a reflection of competence.

(Pihama et al., 2004, p. 42-43)

Krashen (1987) suggests that optimal input should provide tools to help students obtain more input/tools for conversational management. Components of conversational competence include ways of starting conversations (greetings) and ways of keeping conversations going (politeness formulae). Active listening techniques also support this requirement. Questions and expressions that ask for help are further examples of other conversational tools (Krashen, 1987).

Comfort and Transitions

Krashen (1987) refers to the assumption that ‘submersion’ in the dominant culture and exposure to the language through every day encounters, television and radio over a length of time might be perceived as providing sufficient input for language acquisition to occur, an assumption that appears to reinforce the notion that if language hasn’t been acquired there must be some form of deficit within the individual or, even within their culture. Krashen (1987) contends instead, that for language acquisition to occur there needs, amongst other things, to be meaningful engagement in conversations in an environment that fosters a ‘low affective filter’ (i.e., low anxiety, self-confidence, high motivation) or in other words, psychological closeness, or a sense of belonging.

McNaughton (2002) reinforces the need for consideration of ‘psychological matters’ and suggests that for children of diverse cultural and language backgrounds the need for a transfer of a feeling of being “at home” is a “fundamental psychological matter of identity and location”. McNaughton cites Gloria Ladson-Billings (1994) to reinforce the importance of maintaining or enhancing cultural identity. McNaughton also refers to Katherine Au’s (1993) argument that the role of the teacher as “cultural mediator” does not need to “conflict with high literacy achievement” (McNaughton, 2002, p. 28).

Pihama et al., (2004) discuss the importance of maintaining the fundamental values grounded within tikanga Māori and cite the ‘Māori Adult Literacy Working Party’ (2001):

Critical success factors relate to the values that are found in the learning environment of literacy programmes: *aroha*; *whakamana*, *whānau*, *tuakana-teina* nurturing relationships, *manāki*, *tautoko* and *kai*. The kinds of things experienced as part of a homely environment make a difference to whether it is an easy place to be rather than a foreign place. (ibid: 670)

(Pihama et al., 2004, p. 44)

These Māori values are reflected in the culture of caring described and promoted by Macfarlane (2007), Cavanagh (2008), and, Glynn (2008). The transition to school will be aided considerably if practices embodying these values are embedded within the school culture, particularly for those who are unfamiliar with the language of the classroom.

The Ministry of Education (2008a) in *Ka Hikitia – Managing for Success* points out the challenges facing many Māori children:

Evidence makes it clear that by the end of Year 1, literacy achievement for many Māori children is lower than for any other ethnic group, even where the starting point was similar. Research also shows that teacher expectations are often lower for Māori children in Year 1 (McNaughton et al. 2000; Rubie Davies et al. 2006). Early literacy difficulties generally persist and lead to further issues, such as difficulty learning other school subjects and attitudinal and behavioural challenges (Cunningham, 2004; Phillips & Smith, 1997). The focus on foundation years acknowledges that an effective transition to school for Māori students and their whānau, and gaining early literacy and numeracy skills are essential for engagement and achievement throughout schooling, further education and life (Cunningham, 2004; Paris, 2005; Phillips & Smith, 1997; Wylie & Hipkins, 2006).

(Ministry of Education, 2008a, p. 22)

The need to assist with the transition to schools is identified by the Ministry of Education (2008a) in *Ka Hikitia – Managing for Success*. They state that:

Successful transitions to school require effective support for the changes and new expectations for children, whānau and educators. The transition to school and the first years at school have a significant influence on children's achievement until at least age 14. This influence is especially marked for those from poorer backgrounds and has a strong effect on early leaving in secondary school (Bishop et al. (2003); Learning Media (2006); Rubie-Davies et al. (2006); Tunmer et al. (2003); Wylie & Hipkins (2006). This early learning has high significance for effectively engaging youth in education in their teenage years.

(Ministry of Education, 2008a, p. 21)

There is a danger that the transition to schools may focus on supporting students and their families to 'fit' the school culture, rather than supporting the school and community that it serves, to work together to create a learning culture and education environment, within which students are able to relax and be open to learning.

Teachers and students need opportunities to get to know each other. Information about where they come from, and who they are related to, is important, and is a solid basis to forming a positive relationship. McNaughton (2002) states:

For the teacher, knowing where an individual child is "at" is complicated. Knowing where a class of thirty or so children might be at, especially in the beginning stages of formal literacy instruction, is a daunting task indeed. On the positive side, this complexity also means that possible solutions to the problem become more obvious. The outset of formal school instruction - the time when teachers and learners come together for the first time - is a period of developmental transition, when the processes of teaching and learning are thrown into sharp relief.

(McNaughton, 2002, p. 19)

McNaughton (2002) also suggests that while teachers are busy trying to assess where an individual child is "at" the child is equally busy trying to assess "where is the teacher at?" (p. 19). McNaughton (2002) states:

For a child in the classroom, this is the business of figuring out some serious questions: what are you meant to do, why are you meant to do it, how do you learn to do it better, and how do you learn from what the teacher does? If the child is not used to the words or the ways of the teacher, none of these questions might have obvious or easy answers. Moreover, if the child gets the answers wrong and then continues to get them wrong, the meeting of minds becomes increasingly difficult. The likelihood of their meeting in a way that produces effective teaching and learning becomes correspondingly doubtful.

(McNaughton, 2002, p. 19)

Contextual support

Cummins (2000) reinforces the role of the school in addressing literacy issues and suggests that:

...the language spoken by the child in the home is, *in itself* [italics mine], essentially irrelevant. What should be much more important in determining the response of the school are the sociocultural characteristics and overall level of communicative proficiency of children on entry. The school program should in every case attempt to build on (rather than replace) the entry characteristics of children.

(Cummins, 2000, p. 41 – 42)

Cummins (2000) explores related theoretical constructs regarding the distinction he makes between BICS (Basic Interpersonal Communicative Skills) and CALP (Cognitive Academic Language Proficiency) which he also refers to in terms of ‘conversational’ and ‘academic’ proficiency. While Spolsky (1984) objects to the use of the acronyms, Cummins suggests that there is a need to go further than “a simple dichotomy in mapping the underlying dimensions of linguistic performance in academic contexts” (Cummins, 2000, p. 65) and developed a framework (See Figure 2) that distinguishes between cognitive and contextual demands. The framework was designed to “identify the extent to which students are able to cope successfully with the cognitive and linguistic demands made on them by the social and educational environment in which they are obliged to function in school” (Cummins, 2000, p. 66). Cummins stresses that the dimensions described are not considered as independent of each other, and, that the framework is intended as relevant only to the sociocultural context of schooling and not outside of it.

Cognitively Undemanding			
Context Embedded	A	C	Context Reduced
	B	D	
Cognitively Demanding			

Figure 2: Range of contextual support and degree of cognitive involvement in language tasks and activities (Cummins, 2000, p. 68)

Cummins states:

The extremes of the context-embedded / context-reduced continuum are distinguished by the fact that in context-embedded communication the participants can actively negotiate meaning (e.g. by providing feedback that the message has not been understood) and the language is supported by a wide range of meaningful interpersonal and situational cues. Context-reduced communication, on the other hand, relies primarily (or, at the extreme of the continuum, exclusively) on linguistic cues to meaning, and thus successful interpretation of the message depends heavily on knowledge of the language itself. In general ... context-embedded communication is more typical of the everyday world outside the classroom, whereas many of the linguistic demands of the classroom (e.g. manipulating text) reflect communicative activities that are close to the context-reduced end of the continuum.

(Cummins, 2000, p. 67 - 68)

Cummins (2000) suggests that a casual conversation is a typical ‘Quadrant A’ activity. Typical ‘Quadrant B’ activities would be copying notes from the blackboard or filling in worksheets. The more cognitively demanding activities of persuading or challenging points of view in a debate and writing an essay would fit in ‘Quadrant C’ and ‘Quadrant D’ respectively (Cummins, 2000).

Regardless of the arguments surrounding the validity of BICS and CALPS the context embedded and context reduced notions appear to support the arguments for children to engage in conversations in culturally responsive environments as a vehicle for language acquisition and development.

McNaughton (2002) suggests that transfer of learning is dependent on the bridges between the learner’s existing activities, knowledge, and expertise and the instructional activities that they experience at school. McNaughton promotes a process by which children can come to be aware of how these experiences are aligned. He also suggests that learner’s develop greater self control when they have an awareness of goals, rules, and ways of performing that can enhance effective learning.

Peer tutoring in oral language: Tuakana –Teina conversations

Kaupapa Māori Methodology supports and promotes the use of “collaborative learning partnerships which respond to the specific cultural needs and interests of the learner” (Bishop et al., 2003, p. 21). Peer tutoring is a form of non-competitive collaborative learning, and has been found to be a validated and effective

inclusive teaching strategy (Fisher, Schumaker, & Deshler, 1996; Medcalf, 1989, 1995; Medcalf, Medcalf, & Grant, 2005).

McNaughton et al., (2006) refer to Wood's (1998) scaffold model and state:

The basic properties of this model were that the more expert tutor constructs a task environment that is well matched to the current levels of expertise of the learner, and systematically and sensitively alters that environment through the prompts and feedback and management of the difficulty levels of the task itself in such a way that the learner can complete the task effectively and learn from the action of completion

(Wood, 1998 Quoted in McNaughton et al., 2006, p.81)

Krashen (1987) refers to a form of scaffolding when discussing input plus one ($i + 1$) in language acquisition. Krashen suggests that this input occurs naturally in conversations between more experienced and less experienced talkers, such as mother and child. Pihama et al., (2004) cite Hirini Moko Mead (2003) and his description of the integral role that whānau (the extended family), had in children's learning through observation and encouragement. They go on to state that "A number of authors indicate that the early education of Māori children was couched within the structure of 'whanaungatanga' (relationships and connections between whānau) (Te Rangi Hiroa 1949, Makareti 1986, Hohepa 1990, Ka'ai 1990, Pere 1991, Royal-Tangaere 1992)" (Pihama et al., 2004, p. 14).

Peer tutoring has many similarities to the Māori concept of tuakana – teina (elder and younger siblings of the same gender) described by Tangaere (1997) as a traditional method of teaching and learning. Peer tutoring has been identified as a teaching approach that is preferred by Māori (Macfarlane, 2004). The concept of 'ako' (reciprocity between the roles of learner and teacher) is intrinsic within the concept of tuakana – teina and peer tutoring. The Ministry of Education (2008a, summary) considers that 'ako' is the "key to realizing Māori education potential".

Pihama et al., (2004) discuss the notion of 'ako' in depth when exploring traditional Māori pedagogy and state that:

Ako is a traditional Māori concept that can be translated as Māori pedagogy. In tradition-based Māori society, *ako* was an educative process that was integral in the creation, conceptualization, transmission and articulation of Māori knowledge. More recently the term *ako* has appeared in some of the New Zealand educational literature, as Māori and other educators alike, seek to improve the disparities in Maori academic achievement.

(Pihama et al, 2004., p. 13)

In this present research study the tuākana (translated for the purposes of this study to mean tutors) were trained in a procedure that promotes focused conversations between the tuākana and the teina (translated here to mean tutees). The reciprocal learning, or 'ako', embedded within the tuakana - teina peer tutoring approach fosters a sense of whanaungatanga (family-like relationships and sense of belonging) and reflects a sociocultural approach to literacy learning within a culturally responsive and inclusive methodology.

Kōrerorero – (Chat, Conversation) and assessment

Both national and international literature demonstrate that children's oral language develops through talking in meaningful conversations (Bruner, 1983; Bruner & Haste, 1987; Cambourne, 1988; Cazden, 1988; Clay, 1985; Corden, 2000; Grant, 2002; Haywood & Perkins, 2003; Krashen, 1987; Wells Lindfors, 1987). Conversations are as integral to the development of relationships, as relationships are integral to the development of an inclusive 'culture of care,' as described by Cavanagh (2008). It seems appropriate then, that conversations should play a significant role in the methodological approach of research focused on the development of oral language and power sharing relationships. How to measure the development of oral language and power sharing relationships is challenging. While there are a number of oral language assessment tools available, Zehler, Hopstock, Fleischman, and Greniuk (1994) suggest that:

Any decisions regarding assessment should be made with an awareness of actual implementation requirements and what reasonably can be expected of schools, classrooms, and students. If sufficient attention is not given to the implementation requirements for the school, classroom, or student, then the overall assessment design will be in danger of not being carried out as planned.

(Zehler et al., 1994, p. 45)

The present research study is intended to be useful to educators, and involves educators as active participants. Assessment practices needed to be incorporated to serve the purpose of research validity as well as the pedagogical needs of educators. While mindful of these criteria, the most important purpose of assessment is to support the learning of students. Glynn et al., (2006) state:

Students' sense of themselves as having the potential to be effective in the community of literacy practices may be constructed and/or constrained by the

forms of assessment that are used. Assessment should address the need to build students' identities and not destroy them.

(Glynn et al., 2006, p. 136)

There are many approaches to assessment. They generally fall into two broad groups that are described as quantitative (summative) and qualitative (formative). Traditionally quantitative and qualitative forms of assessment have been considered to provide distinctly different types of information. Clarke, Timperley, and Hattie (2003) suggest that while there has been a perceived shift in emphasis from summative to formative assessment, it is unhelpful to make a distinction between them because "any particular assessment may be used formatively or summatively depending on the purpose for which it is intended." (p. 10). Ercikan and Roth (2006) argue against the polarization of quantitative and qualitative approaches in research, and instead promote an integrative approach to research methods. The research questions should drive the selection of assessment tools, and not the reverse.

Glynn et al., (2006) identify problems and difficulties associated with standardized forms of assessment, particularly in the context of the role they play in determining eligibility for support services. While they can be used to identify special needs and access funding, this may serve to reinforce dominant majority perspectives, and reinforce notions of deficit within the child and the family, "rather than within pedagogical practices in classrooms and schools" (Glynn et al., 2006, p. 139). Although there are undoubtedly concerns about the use of standardized forms of assessments, it is also possible that they may serve research purposes as a means of challenging deficit perspectives, by demonstrating positive change within students over a period of time.

Hattie (2003) states that "most educational research remains pre scientific in the sense that it fails to produce results which are either reproducible or generalisable. No wonder it is hard to raise the achievement of all New Zealanders" (p. 13). Meta-analysis provides a means of examining the effect of size and summarizing the practical significance of results (Catts, 1992; Hattie, 1999). Hattie (1999) suggests that estimates of magnitude of treatment effect (known as effect sizes), as well as estimates of statistical significance are needed to demonstrate the effectiveness of interventions and positive impacts on student learning. Hattie

provides a continuum on which “the effects of schooling, including the typical effect”, were summarized with 0 meaning that there is no effect from the introduction of the innovation, and that an innovation with an effect size of 1.0 “would mean that approximately 95% of outcomes would positively enhance achievement, or average students receiving that treatment would exceed 84% of students not receiving that treatment” (p. 4). Hattie acknowledges that the model is constrained to achievement outcomes, but suggests that “the continuum can be generalized to other outcomes of schooling” and has “undertaken a similar continuum for special education students” (p. 4).

Hattie (1999) strongly argues that rather than comparing having the innovation with not having the innovation, innovations should be compared and that the starting point for comparison of effect size should not be zero:

Most innovations that are introduced in schools improve achievement by about .4 of a standard deviation. This is the benchmark figure and provides a “standard” from which to judge effects. A comparison based on typical, real world effects rather than based on the strongest cause possible, or with the weakest cause imaginable [sic]. At minimum, this continuum provides a method for measuring the effects of schooling.

The typical effect does not mean that merely placing a teacher in front of a class would lead to an improvement of .4 standard deviations. Some deliberate attempt to change, improve, plan, modify, or innovate is involved.

(Hattie, 1999, p. 5)

Hattie (1999) refers to the “contention of many researchers that maturation alone can account for much of the enhancement of learning” (p. 6). However, he suggests that “the effect of maturation is probably about one-third of the achievement effect” (p. 6) and provides three normative comparison points to demonstrate that schooling makes a difference:

Normative comparison points

- Student maturation .10
- A teacher in front of a classroom .24
- Innovations in schooling .40

(Hattie, 1999, p. 6)

Catts (1992) suggests that meta-analysis is a vehicle for informing educators and policy makers of the practical impact of research findings. To judge the effects of the implementation of the TALES procedure using Hattie’s (1999) model, the assessments selected for this research study need to be able to demonstrate improved sufficient achievement over time so that this comparison may occur.

Certainly there are a number of issues to consider when assessment of language is concerned, particularly when endeavoring to assess the language abilities of minority culture students, in dominant majority culture education settings, using the dominant culture's assessment tools (Cummins, 1981, 1994, 1996, 2000; MacSwan, 2000; Rivera, 1984; Spolsky, 1990). Corden (2000) suggests that:

Literacy is a problematic concept, dependent on a number of factors and what a particular culture or society deems to be important and relevant... In *Sign of the Beaver* by Elizabeth George Speare (1983), a North American Indian boy named Attean has to attend a white school and finds that within this environment he is semi-literate. He befriends a white boy named Matt and invites him to spend the vacation with him on the Indian reservation. The white boy, literate in his own world, suddenly finds himself illiterate in a different environment.

(Corden, 2000, p. 28)

Formative assessment – Learning conversations

While quantitative assessment tools are useful for demonstrating change over time, formative assessment is an approach that is being promoted within the international and national literature (Clarke et al., 2003; Ministry of Education, 2008b, 2008c, 2008d, 2008e, 2008f; Te Kete Ipurangi, 2008a, 2008b, 2008c; Timperley & Parr, 2004). Glynn et al., (2006) explore responsive approaches to assessment when supporting students with literacy difficulties. They suggest that collaboration with the students facilitates self and peer review, and shifts the control of the learning to the student. Glynn et al., (2006) contend that:

...assessment needs to be an ongoing, continuous and formative process. This provides teachers with formal and informal opportunities to notice what is happening during learning activities, to recognize where the learning of individuals and groups of students is going, as well as to understand how they as teachers can help take that learning further. This process begins by ensuring students receive appropriate literacy learning goals and are engaged in interactive learning conversations throughout their literacy activities. Learning conversations are based on evidence from assessments and observations carried out in authentic learning contexts. Learning conversations include responsive feedback that connects to the student's own generated evidence of learning and feed forward to help the student identify their next most appropriate learning steps. Exemplars of other students' learning can also provide a responsive context in which learning conversations can occur. In doing so teachers can help students to become more independent literacy learners and also monitor their own literacy learning.

(Glynn et al., 2006, p. 156-157)

The formative assessment approach that is promoted in the literature (Clarke et al., 2003; Glynn et al., 2006; Timperley & Parr, 2004) sits comfortably alongside narrative pedagogy. Clarke et al., (2003) cite Black and William's 1998 summary

of the key findings from ten years' research on assessment that demonstrated the significant positive impact that formative assessment strategies had on standards of attainment:

'The research indicates that improving learning through assessment depends on five, deceptively simple, key factors:

- *The provision of effective feedback to pupils;*
- *The active involvement of students in their own learning;*
- *Adjusting teaching to take account of the results of assessment;*
- *A recognition of the profound influence assessment has on the motivation and self-esteem of pupils, both of which are crucial influences on learning;*
- *The need for pupils to be able to assess themselves and understand how to improve.'*

(page 4)

This was further broken down to include:

- *'sharing learning goals with pupils;*
- *Involving pupils in self-assessment;*
- *Providing feedback which leads to pupils recognizing their next steps and how to take them;*
- *[These actions are] underpinned by confidence that every pupil can improve.'*

(page 7)

(Assessment Reform Group, 1999. In Clarke et al., 2003, p. 12)

Hattie (1999) identifies five overall findings from a table of examples of influences on student learning that are above the average effect size of .40:

1. Innovation is the theme underlying most of these effects;
2. The most powerful single moderator that enhances achievement is feedback;
3. The setting of appropriate, specific and challenging goals is critical
4. It is what some teachers do that makes the difference; and
5. The introduction of most teaching school influences merely impacts on the probability of the presence of feedback and challenging goals.

(Hattie, 1999, p. 13)

Hattie (1999) explored and compared each of these findings in more depth and concluded that “the most powerful single moderator that enhances achievement is **feedback**. The simplest prescription for improving education must be “dollops of feedback” (p. 9). The importance of the amount and type of feedback provided is identified as one of the characteristics of responsive social learning contexts (Glynn et al., 2006). Hattie (1999) points out that “The incidence of feedback in the typical classroom is very low, usually seconds at best per day...” (p. 10).

Hattie makes an important distinction between feedback and reinforcement. Feedback provides information for students about how and why they may or may not understand, and helps guide their next steps to enable them to improve their

learning “whereas reinforcement is the evaluative component relating to information and motivation” (p. 9). Hattie also provides examples of feedback that is not particularly effective, with outcome results coming under the threshold of .40 effect size, and cites extrinsic rewards as having an effect size of .37, immediate versus delayed feedback .28, and punishment coming in at a low .20 effect size. Hattie comments on the contrast in “old fashioned notions of intrinsic and extrinsic rewards”, while suggesting that “the better jargon now is task vs. ego involvement” (p. 10). Hattie (1999) states that:

If we, as teachers, are to have an impact on learning, then we must come to know what our students are thinking so that we can provide more feedback, task information, encourage trial and error, and develop deep understanding and transformations. ...

... Appropriate, challenging, and specific goals inform individuals “as to what type or level of performance is to be attained so that they can direct and evaluate their actions and efforts accordingly. Feedback allows them to set reasonable goals and to track their performance in relation to their goals so that adjustments in effort, direction, and even strategy can be made as needed” (Locke & Latham [1992]) ... Feedback without goal setting is less effective, and goal setting without feedback is ineffective.

A combination of goal setting plus feedback is most effective = goals and challenging goals are mutually supportive. The greater the challenge the higher the probability of the student seeking, receiving, and assimilating feedback information.

The scenario is that effective teachers set challenging goals and then structure situations so that students can reach these goals. If teachers can encourage students to share commitment to these challenging goals, and if they provide much feedback, then goals are more likely to be attained.

(Hattie, 1999, pp. 10 – 11)

Hattie (1999) refers to the “self-strategies” that students develop and the impact that these self-strategies may have on their interpretation of the feedback, including how they may “bias, select and retain information that affect their self concepts” (p. 18). Self strategies by students can facilitate or inhibit learning. Hattie (1999) refers to nine “major strategies”:

1. Self-handicapping
2. Discounting
3. Social comparison
4. Disconfirmation
5. Setting less challenging goals
6. Setting performance rather than task goals
7. Self-monitoring
8. Confirming negative cultural stereotypes
9. Seeking negative information

(Hattie, 1999, p. 17)

Hattie (1999) conjectures that “there would be powerful self-strategies by many Māori and Pasifika students that mediate the reception and assimilating of feedback offered by Pākeha teachers” (p. 17). Cultural values and preferences

may provide Māori and Pasifika students with “self strategies” that may have different effects from the ones the teacher expected or intended. Macfarlane’s (2004) reference to the impact of the dominant culture’s assertion that “all children are the same” on the ‘psychology of mana’ has already been noted.

The “power of feedback” is explored further by Hattie and Timperley (2007) who identify and discuss the three major questions related to feedback:

...Where am I going? How am I going? and Where to next? These three questions address the dimensions of feed up, feed back, and feed forward. An ideal learning environment or experience occurs when both teachers and students seek answers to each of these questions. Too often, teachers limit students’ opportunities to receive information about their performance in relation to any of these questions by assuming that responsibility for the students and not considering the learning possibilities for themselves.

(Hattie & Timperley, 2007, p.7 – 8)

Hattie and Timperley (2007) provide a “model of feedback to enhance learning” (See Figure 3).

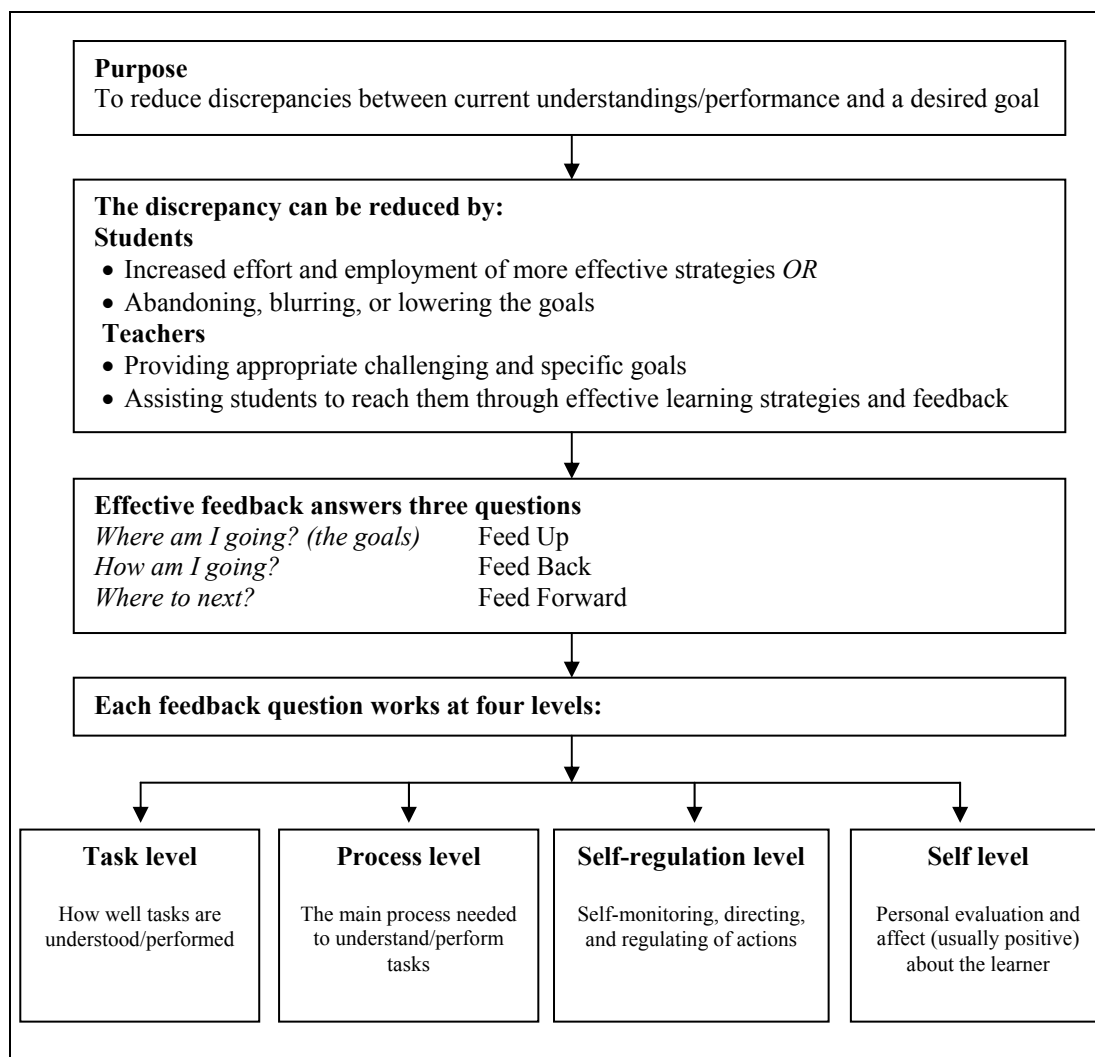


Figure 3: A model of feedback to enhance learning (Hattie & Timperley, 2007, p. 6)

It seems likely that both immediate feedback, related to task, and, delayed feedback related to the processes underlying the task, are effective, just as both negative and positive feedback can be powerful. While students may set higher performance goals after receiving negative, or no feedback at all, positive feedback may increase the student's will to persevere at an activity. The presentation of the feedback plays a significant part in whether or not it is assimilated or accepted. Self-regulation impacts on the effectiveness of feedback, including the development of internal feedback and self assessment which more effective learners employ, whereas less effective learners tend to depend on external information from the teacher or task for feedback (Hattie & Timperley, 2007). The difficulties associated with documenting the frequency of feedback in classrooms is discussed in the literature and it is noted that the frequency of feedback is typically low, with the most common form of feedback being praise which is limited in its effectiveness (Hattie & Timperley, 2007).

Hattie and Timperley (2007) suggest that the potential of feedback to positively impact on learning has:

... major implications for the design of assessments. Too often, assessments are used to provide snapshots of learning rather than providing information that can be used by their students or their teachers to address the three feedback questions. Certainly, a critical conclusion is that teachers need to seek and learn from feedback (such as from students' responses to tests) as much as do students, and only when assessment provides such learning is it of value to either. Most current assessments provide minimal feedback, too often because they rely on recall and are used as external accountability thermometers rather than as feedback devices that are integral to the teaching and learning process.

(Hattie & Timperley, 2007, p. 19)

While "snapshots" of learning may have limited effectiveness, if they are used for accountability purposes, a series of "snapshots" over time can provide answers to the feedback questions at a different level.

The New Zealand Ministry of Education (Ministry of Education, 2007e, 2008b, 2008c, 2008d, 2008e, 2008f), has been strongly influenced by the work of Black and William (Clarke et al., 2003), as is evidenced in the Ministry of Education's Te Kete Ipurangi (TKI) assessment homepage (Ministry of Education, 2008f). The New Zealand Curriculum (Ministry of Education, 2007e) states that:

The primary purpose of assessment is to improve students' learning and teachers' teaching as both student and teacher respond to the information that it provides. With this in mind, schools need to consider how they will gather, analyse, and use assessment information so that it is effective in meeting this purpose.

Assessment for the purpose of improving student learning is best understood as an ongoing process that arises out of the interaction between teaching and learning. It involves the focused and timely gathering, analysis, interpretation, and use of information that can provide evidence of student progress. Much of this evidence is "of the moment". Analysis and interpretation often take place in the mind of the teacher, who then uses the insights gained to shape their actions as they continue to work with their students.

(Ministry of Education, 2007e, p. 39)

Timperley and Parr (2004) acknowledge the value of ongoing informal assessment that they call the teacher's 'log-in-the-head' (Timperley & Parr, 2004). When discussing the area of writing they suggest that the teacher's content knowledge and understanding of how expertise is developed, as well as the expectations the teacher has for the students, influences what the teacher attends to while observing students. Timperley and Parr (2004) identify some concerns and suggest that rapid developments in research mean that teachers may not have the in-depth knowledge required. They also refer to problems with observer bias relating to expectations, and, point out that the teachers' daily immersion in the detail of what is going on may lead them to lose sight of whether or not the progress of individuals or the class is adequate. They suggest that both formal benchmarked assessment information and informal evidence of student's progress are "essential for a comprehensive picture that will inform sound teaching decisions" (Timperley & Parr, 2004) p 29. These findings and conclusions about teacher's observations in the context of written work may also apply to teacher's ongoing informal assessment of oral language.

The importance of audio recording in oral language assessment

My research is about conversation only in this incidental way, that we can get the actual happenings on tape and transcribe them more or less, and therefore have something to begin with. If you can't deal with the actual detail of actual events then you can't have a science of social life.

(Sacks 1992b, p. 26 in Silverman 2003, p. 354)

Tape recordings and transcripts have a long and valued history in research methodology. There are a number of advantages of audio tape recording conversations, whether they are interviews, or 'fly on the wall' tape recordings of

conversations in context. Tape recordings provide an accurate record that can be played again by others to check validity of findings; they can be played again repeatedly to allow transcribing of what has actually been said, and played again to make improvements to transcripts (Silverman, 2003). It is also possible to “re-visit” a transcript to look for new and different content and/or linguistic information. Although some note that a disadvantage of audio tape recording is that you don’t get a complete picture due to the lack of other cues like facial expressions, there is general consensus that transcripts of audio tape recorded conversations is a valid way to collect evidence (Silverman, 2003).

Audio tape recordings and transcripts have been identified by Kaupapa Māori researchers as a powerful tool for co-constructing collaborative stories (Bishop et al., 2003). Glynn et al., (2006) promote the use of timed audio-taped samples of oral language in responsive social contexts when exploring responsive approaches to assessments and suggest that “In many schools, teachers may have so little authentic knowledge and experience of the family and community contexts in which their students live that they are unable to participate in those literacy contexts and practices in which their students are already successful.” (p. 5). There is potential for teachers to listen to tapes of students’ conversations with the students in order to facilitate their own insight and knowledge. (Glynn et al., 2006) state:

...even with much goodwill on the part of teachers, they needed a great deal more support in learning how to introduce more responsive pedagogies. Undoubtedly, it is extremely challenging to shift the teaching pedagogies and practices of some teachers. In research presented earlier, Bishop et al. (2003) found that one effective way to do this was to share with teachers the direct experiences of students through narratives as an objective window into students’ reality. Teachers were then able to co-construct more effective in-class responses.

(Glynn et al., 2006, p. 38)

The role of audio tape recording as a tool in the area of oral language assessment has been identified in the English as a Second Language literature (NC Standard Course of Study, 2008) and has been promoted by the New Zealand Ministry of Education (1994). While used for assignment purposes, or to tape record a variety of formal language assessment tasks, its use as a tool for capturing authentic ‘natural’ conversation in ‘natural’ contexts has not been explored in depth.

An overview of the TALEs programme

The TALEs programme (Grant, 2002) was developed in response to an investigation of what support for oral language development was available to New Zealand schools (Atvars, Stock et al., 1999; Ministry of Education, 1994, 1996b, 1997; Ministry of Education & Special Education Services, 2002; Special Education Services, 1999, 2000). It was apparent from the literature that there were very few resources available to teachers that provide inclusive strategies for the development of oral language without specific links to other curriculum areas. The findings reflect those reported on in the British context by Cordon (2000), who notes that although there is a substantial body of research which demonstrates the relationship between talk and academic achievement spoken language was largely ignored as part of the school curriculum in the United Kingdom (p. 4). Cordon also complains about the lack of practical examples provided for teachers.

The development of the TALEs programme (Grant, 2002) was informed by a wide range of literature. Language acquisition theory reinforced the central importance that meaningful conversations play in the acquisition of language (Cazden, 1988, 1990; Clay, 1998; Cordon, 2000; Krashen, 1987; Ministry of Education, 1996; Vygotsky, 1962). The literature also reported on the interaction patterns of ‘classroom communities’ within which “teachers’ talk is high in known-answer questions, evaluation, and in control” (Lindfors (1978, p. 383). The limitations in the amount of time that teachers’ are able to spend engaged in conversations was acknowledged (Clay, 1998). These findings lead to an exploration of literature concerning peer tutoring and tuakana – teina approaches to learning (Fisher, Schumaker et al., 1996; Glynn, 1994; Glynn, Berryman et al., 1997; Greenwood, Sloane, and Baskin., 1974; Ladson-Billings, 1994; Maheady, Sacca, and Harper, 1987; McGrath and Noble, 1993; Medcalf, 1995; Medcalf and Glynn, 1987; Tangaere, 1997; Wood, Wood, Ainsworth and O’Malley, 1995), and the support available for English as Second Language Learners (ESL) (Flanigan, 1991; Hansen, 1986; Iwamura, 1981; Krashen, 1987).

‘TALES’ is an acronym for Talk, Ask, Listen, Encourage, Say. (See Appendix 1: ‘TALES Toolkit’). The ‘TALES Toolkit’ (Grant, 2002) was designed to assist trained older senior class students (tuākana/tutors) to help their younger junior

class students (teina/tutees) to talk more and acquire oral language. The tuakana – teina pairs played together in the classroom, for half an hour a day, four times a week. They used dough, toys, and other materials as props for their conversations.

The Talk, Ask, Listen, Encourage, and, Say components in the acronym TALES reflect the six conditions that promote ‘Optimal Input’ for language to be acquired as described by Krashen (1987) in the ESL language literature. These six conditions reflect the sociocultural and literacy learning understandings explored in the literature.

The T – TALK component of the ‘TALES Toolkit’ (See Appendix 1) includes prompts designed to help the tuākana ensure that the conversations engaged in with the teina are ‘interesting and relevant’ (Krashen, 1987). The ‘TALES Toolkit’ prompts the tuākana to talk lots about things that might be interesting to the teina and to make lots of comments about what both are doing as they are doing it, thus modelling familiar and new language to their apprentice. The need for children to be able to bring their own knowledge and understandings to the learning contexts, and engage with others is a common thread throughout the sociocultural and narrative pedagogy literature (Bishop & Glynn, 1999; Glynn et al., 2006; Rogoff, 1990).

The ‘TALES Toolkit’ prompts the tuākana to model polite conversational etiquette (greetings, farewells, please, thank you, you’re welcome etc). This prompt was designed to provide practice and reminders for the tuākana in their own conversations as well as providing tools to help students obtain more input as recommended by Krashen (1987). Krashen stresses that optimal input should be in sufficient quantity and considers that other people are more likely to engage in conversation with the language learner if basic conversational etiquette is used, thus providing more input in a range of settings.

The A – ASK component of the ‘TALES Toolkit’ (See Appendix 1) takes into consideration a number of issues highlighted in the literature including trying to foster a ‘balance of power’ (Bishop & Glynn, 1999) between the tuākana and the teina. The ‘TALES Toolkit’ prompts the tuākana to ask the teina what they want to play with. The prompt was designed to foster teina choice with the intention of

providing opportunity for the teina to bring their knowledge and understandings to the learning context.

Krashen (1987) explores the issues surrounding the 'readiness to speak' stage. A 'silent period' is considered acceptable in the early stages of second language acquisition. In the New Zealand context Metge and Kinloch (1978) examine some of the difficulties of communication between Māori and English culture due to some common misunderstandings. Clay (1998) refers to Metge and Kinloch (1978) and states that "Culture and context and the rules of conversation are very important, and little children have learned that before they come through the school doors. To some extent they are wary of using the wrong language in the wrong place or with the wrong person." (Clay, 1998, p. 25-26). In the 'A – ASK' component of TALES the tuākana are trained not to ask questions if the teina seemed uncomfortable. The component allows for a 'silent period' while maintaining a high level of comfort and supplying input that busy teachers may not be able to allow for over a period of time (Grant, 2002). The tuākana are prompted to observe if the teina is comfortable and confident answering questions, and if they are the A – ASK component incorporates open ended questioning techniques that encourage them to 'talk more'. The tuākana are prompted to check comprehension, as promoted by Krashen (1987), by asking the teina if they understood what they were talking about.

The L – LISTEN component of the 'TALES Toolkit' encourages 'active listening' techniques. Swain, Friehe, and Harrington (2004) highlight that oral skills and listening are essential for literacy development. They refer to the lack of emphasis placed on listening for learning in teacher training programmes. They note that the skill of listening is rarely taught in elementary classrooms even though many students experience difficulty learning in classrooms which use traditional teaching approaches that are heavily dependent on spoken language and listening. Bishop and Glynn (1999) reinforce the need for a skilled listener and commentator in narrative approaches to classrooms conversations. Renck (1995) promotes active listening and suggests that children should be provided with opportunities to spend as much time listening to each other as they do listening to the teacher. The active listening techniques that the 'TALES Toolkit' prompts the tuākana to use include making sure their body language shows they are listening

(looking at the speaker, nodding/shaking head etc), and that they make sounds that show that they are listening for example “Uh huh”, “mm”, “okay”, “yeah” etc.

The E – ENCOURAGE component of the ‘TALES Toolkit’ includes reminders of ways in which the tuākana could encourage the teina to ‘talk more’. This component also includes a focus on praise and the use of positive comments about what the teina are doing, or things the tuākana have noticed or heard about the teina. This component was designed to help keep the “affective filter “low”, making sure the student is open to input” (Krashen, 1987, p. 73), and not put on the defensive.

The S – SAY component of the ‘TALES Toolkit’ includes further emphasis on conversational etiquette through prompting the tuākana to use the teina’s name throughout the conversation, as well as a reminder for them to use greetings and farewells. This component was designed to foster whanaungatanga through prompting the tuākana to let the teina know by the way they say goodbye that they really liked being with them and looked forward to seeing them again.

While anecdotal observations indicated that there were gains for the tuākana involved in the 2002 study, the need to justify their extended involvement in ‘play activities’ was evident. The conversations between the tuākana and the teina were audio taped by the tuākana for research treatment integrity purposes. These tape recordings revealed the potential of using the tapes for better assessing the gains made by the tuākana.

Summary

In summary, the literature review explores several theoretical strands which are underpinned by the socio-cultural understandings that language, culture, social relationships and context are fundamental to learning and literacy development.

Socio political issues such as past policies that facilitated assimilation and subtractive bilingual approaches have created language barriers for Maori children in mainstream settings in New Zealand particularly where teachers are predominantly from the majority culture. The imbalance of power is reinforced in

classroom ‘conversations’ where the teacher’s language, culture, and ways of knowing dominate. The ‘conversations’ tend to be question and answer in nature, rarely focussed on getting to know one another as people. The student’s sense making processes and prior knowledge are undermined, their stories untold and literacy learning is limited. This leads to the need for research to explore pedagogical ‘pathways’ that support Māori kaupapa.

When exploring the literature for ways in which some of these issues can be addressed it was evident that to be effective teachers need to be culturally responsive and in many cases this necessitates a change in teacher pedagogy. Being mindful of the children’s culture, understandings, and sense making processes that they bring to new learning, teachers’ collaborative conversations which build on what children know, which focus on potential and challenge deficit dialogue have the potential to transform teacher pedagogy. It needs to be acknowledged that the process for learning is the same for teachers, and we need to consider this when trying to support them to learn new pedagogy.

The role of meaningful conversations in language acquisition promoted in the ESL literature (Krashen, 1987) is central to this thesis. Reframing Māori children’s oral language acquisition in mainstream classrooms from a NESB (Non English Speaking Background) or ESL (English as a second language) literature perspective through focussed professional collaborative conversations may also facilitate the shift from a deficit approach towards a more purposeful and useful educational approach. Narrative pedagogy that considers learning to be the outcome of interactions (Bishop & Glynn, 1999) reinforces the notion that learning occurs through the process of storying and re-storying in social relationships. The process of storying and re-storying is facilitated through contextually embedded conversations.

Clearly oral language is inextricably linked to cultural contexts and is also critical to the development of wider literacy skills in reading and writing. Oral language acquisition and learning is facilitated when children feel comfortable and at ease. Children’s literacy learning is facilitated when they can bring their own sense making processes to the learning context, reinforcing the need for educators to provide contextual support which builds ‘bridges’ or provides ‘scaffolds’ that

support the students transition into school. It seems that teachers require pedagogies that help build these bridges which need to be two way, enabling the teacher to 'travel' and explore the child's worldview. Peer tutoring and reciprocal learning approaches which are underpinned by the concept of 'Ako' are pedagogies available to teachers and can be adapted to incorporate a strong focus on oral language acquisition.

The TALEs programme (Grant, 2002) has built on such pedagogies and its development was informed by a wide range of literature including an investigation of: what support for oral language development was available to New Zealand schools; language acquisition theory; peer tutoring and tuakana - teina approaches to learning; and, support available for English as Second Language Learners (ESL). The importance of tuakana development within peer tutoring and tuakana - teina approaches was acknowledged but evidence for the gains identified in the 2002 study were limited to anecdotal observations and highlighted the need to develop better assessment tools in this area.

The literature reviewed reminds us of the central importance of socio-cultural issues when we explore ways of assessing language acquisition.

Through the use of a range of quantitative and qualitative data, this research study examined (1) the impact of the TALEs programme on the oral language of the teina, and (2) the effectiveness of tuākana implementation of the TALEs programme, and (3) what impact involvement in the TALEs programme had on the tuākana in a variety of areas in relation to their personal learning intention e.g., confidence, mana (integrity, charisma, prestige), interpersonal speaking skills and language use, behaviour, responsibility, relationship with other children, relationship with teacher(s). The research study also explored the usefulness of using five minute probes of taped conversations as a feedback device within formative assessment that assists teachers and students with the development of oral language.

The research study was conducted in three stages over a four year period (Refer to Appendix 2: Research Timetable).

CHAPTER 3: METHOD

Stage 1

Selection of participants and settings

A total of 144 students and 19 teachers, including five key teachers, from four schools were involved in the programme and research study during 2005 and 2006.

Discussions and negotiations took place in 2004 with three decile 2 urban mainstream Gisborne primary school principals and Board of Trustees. The Boards of Trustees members are generally respected elected representatives of the community that might be considered *kaumātua* (a respected elder). In the initial research plan, three schools were to be included in the research study for two years in 2005 and 2006. The importance of talking to *kaumātua* about the research study is highlighted by Cram (2001). The principals and Boards of Trustees of three Decile 2 urban mainstream primary schools gave consent for the researcher to invite a selection of junior class (Year 1), and senior class (Year 6), mainstream teachers, and the children in their classrooms, to be involved in the research study in 2005 and 2006 (See Table 2).

Table 2
Planned for participants 2004

Year	Schools	Teachers	Students
2005	3	6	36
2006	3	6	72
Total	3	6	108

The teachers were asked to identify and invite junior class children that they perceived to be experiencing difficulties with oral language, and/or appeared 'shy', or who were finding the transition to the school culture challenging, to take part in the study. The teachers were asked to identify and invite senior class children who were quiet/'shy', and/or demonstrated challenging behaviour, and/or experienced difficulties in reading and written language, to take part in the study.

The Boards of Trustees, Principals, and teachers of the three schools gave verbal and written consent. However, the initial research design had to change because of

the sudden withdrawal of the largest of the three schools at the end of 2004, due to their subsequent commitment to a professional development project. This had major ramifications for other aspects of the overall research design. Two of the original three Decile 2 schools were involved for two years in 2005 and 2006. After further discussions and negotiations in 2005, two additional schools (Decile 3) were involved for one year in 2006 (See Table 3). The proposed schedule of data collection changed, with reading and writing data no longer collected, and interview schedules modified.

Table 3
Revised plan for participants

Year	Schools	Teachers	Students
2005	2	4	48
2006	4	8	96
Total	4	8	144

Hence the research study was conducted in four Gisborne primary schools, in low socio-economic areas (two Decile 2 schools, and two Decile 3 schools), each with a high proportion of Māori students in mainstream classrooms (range 54% to 93%, mean: 80%) (See Table 4):

Table 4
Schools involved in the research study

School context	2005		2006			
	School A	School B	School A	School B	School C	School D
Decile rating	2	2	2	2	3	3
Number of students	170	115	142	86	372	388
Percentage of Māori students	88	93	88	93	64	54

The Principals and Boards of Trustees gave consent for the researcher to invite a selection of junior class (Year 1), and senior class (Year 6), mainstream teachers, and the children in their classrooms, to participate in the research study in 2005 and 2006 (Stage 2 and Stage 3). The Principals and Boards of Trustees of two Decile 3, urban, mainstream primary schools, gave consent for the researcher to invite a selection of junior class (Year 1), and senior class (Year 6), mainstream teachers, and the children in their classrooms, to participate in the study in 2006 (Stage 3).

All Boards of Trustees, Principals, teachers, students, and the student's parents/caregivers received written and oral information about the proposed programme and research study (See Appendix 3: TALEs consultation information sheets). Participation was voluntary, and information provided made it clear that the participants, and/or, the parents/caregivers of participants would remain anonymous and could withdraw from involvement in the research at any time.

Parent/Caregiver consultation

‘He reo e rangona, engari, he kanohi’
(a voice may be heard but a face needs to be seen).
(Cram, 2001, p. 43)

Cram (2001) highlights the importance to Māori people of ‘He kanohi kitea’, meeting with people, face to face. Parents/caregivers were invited to a hui (meeting) at each school (See Appendix 4: Letter to Parents/Caregivers) where an oral presentation and written information were given about the programme and research study (See Appendix 3: TALEs consultation information sheets). I was mindful of Cram’s assertion that, “A researcher invariably enters the research context having been trained in a Western institution, often in Western models of research and approaches to knowledge. A [Māori] community often enters research with historical reference points of being ‘screwed’ by non-Māori (and at times, Māori) researchers and their research findings” (Cram, 2001, p. 42). The issue of a non-Maori researcher endeavouring to undertake a culturally responsive research study was raised by the researcher and discussed to varying degrees at each hui. Parents/caregivers were asked if they believed that the research study proposed was appropriate, if they had concerns, or if they had suggestions for improving the research study. As well as providing an opportunity to foster whanaungatanga (relationship, kinship), a cup of tea and kai (food) provided by the researcher, gave an opportunity to engage in less formal conversation about the intended programme and research study.

All parents/caregivers endorsed the approach and several indicated that they were particularly pleased that the tuakana teina concept was incorporated into the research study. Discussion also focussed on the effect past policies, about not

speaking Māori at home, had on parents and grandparents. Several parent/caregivers felt this had had a negative impact on their own schooling. The discussion informed the researcher that the ‘problem’ of language acquisition and oral language loss was framed from an ecological rather deficit paradigm perspective.

Cram (2001), when exploring Linda Mead’s (1997) seven guidelines for Maori research ethics, highlights the importance of allowing people to define their own space, and to meet on their own terms. If parents/caregivers were unable, or, chose not to, attend the hui at school, the researcher visited them in their home, at their request.

Parents/caregivers were supported to become involved in the programme and in the research study. The researcher provided a contact phone number and address, and invited the parents/caregivers to contact her at any time. Those without access to a telephone were encouraged to contact the school so that the researcher could arrange to meet with them. The researcher and teachers invited the parents/caregivers of the students involved to participate throughout the whole course of the research study, and particularly during the implementation of the programme phase. Parents/caregivers were encouraged to attend, and assist, with the training of the tuakana groups.

Participant consent

The researcher obtained written consent from the Boards of Trustees, Principals, teachers, senior students, and, parents/caregivers of all students involved. The researcher explained the programme and research study to the junior students in language appropriate to their age and stage, and obtained oral confirmation from them of their willingness to be involved in the research study. Consent forms explained that the information would be shared with the research supervisors and the teachers involved in the respective schools. (See Appendix 5a: Board of Trustees consent form, Appendix 5b: Principal consent form, Appendix 5c: Teacher consent form, Appendix 5d: Parent/Caregiver consent form, Appendix 5e: Tuakana consent form). The researcher also made it clear that there would be no sharing of information pertaining to any one school with any of the other schools.

During the consultation process the researcher informed all participants, and parents /caregivers that a significant component of the proposed research study involved audio tape recording, as well as transcription and analysis of taped conversations between the students, between the students and teachers, between the researcher and students, and, between the researcher and teachers. The researcher made it clear that normal school procedures would apply if any unanticipated personal disclosures were recorded between the students.

Participants

The junior class (Years 1), and senior class (Year 6), teachers who agreed to be involved in the intervention in 2005 and 2006 paired up in their respective schools (See Table 5 and Table 6).

Table 5
Teacher participants 2005

School	% Ethnicity (Students)	Key teacher number	Year	Number of years teaching	Gender	Ethnicity (Key teachers)	Qualifications
School A Decile: 2 Roll: 170	Māori: 88% Pākeha: 7% Other: 5%	1	1	20	F	Pākeha	B. Ed. , Diploma ICT in Education
		2	6	23	M	Pākeha	TTC (N.Z Trained Teacher Certificate)
School B Decile: 2 Roll: 115	Māori: 93% Pākeha: 3% Other: 4%	3	1	30	F	Pākeha	Diploma
		4	6	5	F	Pākeha	B. Ed. (Teaching)

As agreed in negotiations, the Special Education Needs Coordinator (SENCO), supported by the Deputy Principal, took responsibility for the role of senior class ‘teacher’ for School C (See Table 6).

All of the key teachers held, or were acting in, senior management positions. They were either Assistant Principal (AP) or Deputy Principal (DP) within their respective schools, and they had teacher release time attached to their positions. Some of this release time facilitated their involvement with the researcher, and with the implementation of the TALES programme.

Table 6
Teacher participants 2006

School	% Ethnicity (Students)	Key teacher number	Year	Number of years teaching	Gender	Ethnicity	Qualifications ²
<i>School A</i> Decile: 2 Roll: 142	Māori: 88% Pākeha: 7% Other: 5%	1	1	20	F	Pākeha	B. Ed. , Diploma ICT in Education
		2	6	23	M	Pākeha	TTC (N.Z. Trained Teacher Certificate)
<i>School B</i> Decile: Roll: 86	Māori: 93% Pākeha: 1% Other: 6%	3	1	30	F	Pākeha	Diploma
		4	6	5	F	Pākeha	B. Ed. (Teaching)
<i>School C</i> Decile: Roll: 372	Māori: 64% Pākeha: 33% Other: 3%	5	1	25+	F	Pākeha	Teachers Certificate Diploma
		6	6	31	F	Pākeha	Bch Tch & Lng
		7		*	F	Pākeha	Information not provided *
<i>School D</i> Decile: 3 Roll: 388	Māori: 54% Pākeha: 41% Other: 5%	8	1	*	F	Pākeha	Information not provided *
		9	6	*	F	Pākeha	Information not provided *

While the revised research plan was for two pairs of teachers to be involved in the research study in 2005 and 2006, and an additional two pairs of teachers to be involved in 2006 (See Table 3), the reality and unpredictability of school life resulted in a number of other teachers being involved to varying degrees (See Table 7). This occurred for a number of reasons:

- The senior class teachers that the SENCO teacher represented needed to be kept informed and involved in action plan decision making, and updated throughout the intervention
- Children identified with greatest need were spread throughout different junior classes
- More children moved into the schools as new entrants
- Children involved in the TALES programme were moved into new classes due to new entrant numbers rising

² Trained Teacher Certificate (TTC), the Teachers Diploma, and the Information Communication Technology (ICT) diplomas are graduate level qualifications in New Zealand. Primary school teachers are required to have a TTC and a Teachers Diploma. Bachelor of Education (B. Ed) and Bachelor of Teaching and Learning are postgraduate level qualifications in New Zealand.

- Teachers “standing in” for the senior management teachers needed to understand the purpose of the programme and be kept fully informed about the management of it.

Table 7
Actual participants 2005 and 2006

Year	Schools	Number of Key Teachers	Additional Teachers	Number of Students
2005	A	2	2	24
	B	2	2	24
Total 2005	2	4	4	48
2006	A	2	2	24
	B	2	2	24
	C	3	3	24
	D	2	1	24
Total 2006	4	9	8	96
Total Overall	4	9	10	144
	Includes 2 schools involved both years	Includes 4 teachers involved both years	Includes 2 teachers involved both years	
		19 Teachers involved overall		

The senior class students (Year 6), involved in the research study were named tuākana (tutors) and the junior class students (Year 1), teina (tutees). Traditionally the concept of tuakana-teina would refer to an older sibling and a younger sibling. In this context the tuakana teina concept has been used to reflect and promote the concept of whanaungatanga (relationship, kinship) between older and younger children in schools, involving reciprocal responsibilities to support each other. The concept of ‘ako’ reflects the reciprocal nature of learning and teaching. It is considered “...‘acceptable practice for the learner to shift roles and become the teacher, and for the teacher to become the learner’ (p. 56).” Tangaere (1997) cited in Bishop and Glynn (1999, p. 19-20).

While it is possible to consider all the various participants involved in this research study as sets of tuakana teina pairs (See Figure 4), the term tuakana teina is applied to the senior class students as tuākana and the junior class students as teina throughout this research study.

CONVERSATIONS AND RELATIONSHIPS				
Teina (Researcher)	Teina (Researcher)	Teina (Junior students)	Teina (Senior students)	Teina (Reader)
↑	↑	↑	↑	↑
<i>Ako</i>	<i>Ako</i>	<i>Ako</i>	<i>Ako</i>	<i>Ako</i>
↓	↓	↓	↓	↓
Tuākana (Key teachers)	Tuākana (Senior students)	Tuākana (Senior students)	Tuākana (Key teachers – including researcher)	Tuakana (Researcher)

Figure 4: Conversations and relationships between tuakana-teina pairs

A total of six sets of three groups of tuakana – teina pairs participated in the research study. The students selected in each school each year were randomly assigned in three groups of four tuakana – teina pairs. Two sets of three groups of tuakana – teina pairs came from the two Decile 2 schools that participated in the study in 2005. Two sets of three groups of tuakana – teina pairs came from the two Decile 2 schools plus the further two Decile 3 schools that took part in 2006. At the beginning of the study each group of tuakana – teina pairs comprised four tuākana and four teina, (See Table 8).

Table 8

Student participants 2005 and 2006

School	Group 1 In treatment (Approximately 6 weeks)	Group 2 In treatment (Approximately 6 weeks)	Group 3 In treatment (Approximately 6 weeks)
A 2005	Group 1 Pair 1: Tuakana 1 & Teina 1 Pair 2: Tuakana 2 & Teina 2 Pair 3: Tuakana 3 & Teina 3 Pair 4: Tuakana 4 & Teina 4	Group 2 Pair 1: Tuakana 5 & Teina 5 Pair 2: Tuakana 6 & Teina 6 Pair 3: Tuakana 7 & Teina 7 Pair 4: Tuakana 8 & Teina 8	Group 3 Pair 1: Tuakana 9 & Teina 9 Pair 2: Tuakana 10 & Teina 10 Pair 3: Tuakana 11 & Teina 11 Pair 4: Tuakana 12 & Teina 12
A 2006	Group 1 Pair 1: Tuakana 25 & Teina 25 Pair 2: Tuakana 26 & Teina 26 Pair 3: Tuakana 27 & Teina 27 Pair 4: Tuakana 28 & Teina 28	Group 2 Pair 1: Tuakana 29 & Teina 29 Pair 2: Tuakana 30 & Teina 30 Pair 3: Tuakana 31 & Teina 31 Pair 4: Tuakana 32 & Teina 32	Group 3 Pair 1: Tuakana 33 & Teina 33 Pair 2: Tuakana 34 & Teina 34 Pair 3: Tuakana 35 & Teina 35 Pair 4: Tuakana 36 & Teina 36
B 2005	Group 1 Pair 1: Tuakana 13 & Teina 13 Pair 2: Tuakana 14 & Teina 14 Pair 3: Tuakana 15 & Teina 15 Pair 4: Tuakana 16 & Teina 16	Group 2 Pair 1: Tuakana 17 & Teina 17 Pair 2: Tuakana 18 & Teina 18 Pair 3: Tuakana 19 & Teina 19 Pair 4: Tuakana 20 & Teina 20	Group 3 Pair 1: Tuakana 21 & Teina 21 Pair 2: Tuakana 22 & Teina 22 Pair 3: Tuakana 23 & Teina 23 Pair 4: Tuakana 24 & Teina 24
B 2006	Group 1 Pair 1: Tuakana 37 & Teina 37 Pair 2: Tuakana 38 & Teina 38 Pair 3: Tuakana 39 & Teina 39 Pair 4: Tuakana 40 & Teina 40	Group 2 Pair 1: Tuakana 41 & Teina 41 Pair 2: Tuakana 42 & Teina 42 Pair 3: Tuakana 43 & Teina 43 Pair 4: Tuakana 44 & Teina 44	Group 3 Pair 1: Tuakana 45 & Teina 45 Pair 2: Tuakana 46 & Teina 46 Pair 3: Tuakana 47 & Teina 47 Pair 4: Tuakana 48 & Teina 48
C 2006	Group 1 Pair 1: Tuakana 49 & Teina 49 Pair 2: Tuakana 50 & Teina 50 Pair 3: Tuakana 51 & Teina 51 Pair 4: Tuakana 52 & Teina 52	Group 2 Pair 1: Tuakana 53 & Teina 53 Pair 2: Tuakana 54 & Teina 54 Pair 3: Tuakana 55 & Teina 55 Pair 4: Tuakana 56 & Teina 56	Group 3 Pair 1: Tuakana 57 & Teina 57 Pair 2: Tuakana 58 & Teina 58 Pair 3: Tuakana 59 & Teina 59 Pair 4: Tuakana 60 & Teina 60
D 2006	Group 1 Pair 1: Tuakana 61 & Teina 61 Pair 2: Tuakana 62 & Teina 62 Pair 3: Tuakana 63 & Teina 63 Pair 4: Tuakana 64 & Teina 64	Group 2 Pair 1: Tuakana 65 & Teina 65 Pair 2: Tuakana 66 & Teina 66 Pair 3: Tuakana 67 & Teina 67 Pair 4: Tuakana 68 & Teina 68	Group 3 Pair 1: Tuakana 69 & Teina 69 Pair 2: Tuakana 70 & Teina 70 Pair 3: Tuakana 71 & Teina 71 Pair 4: Tuakana 72 & Teina 72

Highlighted tuakana teina pairs were randomly selected for detailed analysis.

Stage 2

Procedures

The initial parent/caregiver consultation and selection hui occurred in the first term in each year. After participants and/or parent/caregivers endorsed the proposed research study and gave written consent, pre intervention interviews of teachers and tuākana, as well as planning, and other baseline data collection, occurred. The implementation phase of the programme occurred for three school terms, (approximately twenty four weeks) during term 2, term 3, and term 4 for each pair of classrooms involved. In line with the integrative approach to research methodology proposed by Ercikan and Roth (2006) multiple approaches and modes of inquiry were undertaken in this research study.

Quantitative data collected within a multiple baseline design were collected at four time points during the course of each implementation phase for three oral language measures for the teina (See Table 9). This compared in-treatment and not-in-treatment data, and enabled measurement of the effect of the intervention on students over time, providing a means of comparing the effect size of the intervention with Hattie's (1999) benchmark of .40. The researcher collected quantitative data that measured accuracy prior to the implementation of the programme, and then three more times at approximately six weekly intervals using a multiple baseline approach.

Table 9
Teina quantitative assessment schedule 2005 and 2006

School	Wks 1-2	In treatment <input type="checkbox"/> Not in treatment <input type="checkbox"/> (Weeks 3-8 approximately)	Wks 9-10	In treatment <input type="checkbox"/> Not in treatment <input type="checkbox"/> (Weeks 11 – 16 approximately)	Wks 17-18	In treatment <input type="checkbox"/> Not in treatment <input type="checkbox"/> (Weeks 19 - 24 approximately)	Wks 25 -26
	2005						
A	Quantitative data collected on all teina	Group 1 Tuakana & Teina: 1, 2, 3, 4	Quantitative data collected on all teina	Group 1	Quantitative data collected on all teina	Group 1	Quantitative data collected on all teina
		Group 2		Group 2 Tuakana & Teina: 5, 6, 7, 8		Group 2	
		Group 3		Group 3		Group 3 Tuakana & Teina: 9, 10, 11, 12	
		Group 1 Tuakana & Teina: 13, 14, 15, 16		Group 1		Group 1	
		Group 2		Group 2 Tuakana & Teina: 17, 18, 19, 20		Group 2	
		Group 3		Group 3		Group 3 Tuakana & Teina: 21, 22, 23, 24	
B	Quantitative data collected on all teina	Group 1 Tuakana & Teina: 25, 26, 27, 28	Quantitative data collected on all teina	Group 1	Quantitative data collected on all teina	Group 1	Quantitative data collected on all teina
		Group 2		Group 2 Tuakana & Teina: 29, 30, 31, 32		Group 2	
		Group 3		Group 3		Group 3 Tuakana & Teina: 33, 34, 35, 36	
		Group 1 Tuakana & Teina: 37, 38, 39, 40		Group 1		Group 1	
		Group 2		Group 2 Tuakana & Teina: 41, 42, 43, 44		Group 2	
		Group 3		Group 3		Group 3 Tuakana & Teina: 45, 46, 47, 48	
C	Quantitative data collected on all teina	Group 1 Tuakana & Teina: 49, 50, 51, 52	Quantitative data collected on all teina	Group 1	Quantitative data collected on all teina	Group 1	Quantitative data collected on all teina
		Group 2		Group 2 Tuakana & Teina: 53, 54, 55, 56		Group 2	
		Group 3		Group 3		Group 3 Tuakana & Teina: 57, 58, 59, 60	
		Group 1 Tuakana & Teina: 61, 62, 63, 64		Group 1		Group 1	
		Group 2		Group 2 Tuakana & Teina: 65, 66, 67, 68		Group 2	
		Group 3		Group 3		Group 3 Tuakana & Teina: 69, 70, 71, 72	
D	Quantitative data collected on all teina	Group 1 Tuakana & Teina: 61, 62, 63, 64	Quantitative data collected on all teina	Group 1	Quantitative data collected on all teina	Group 1	Quantitative data collected on all teina
		Group 2		Group 2 Tuakana & Teina: 65, 66, 67, 68		Group 2	
		Group 3		Group 3		Group 3 Tuakana & Teina: 69, 70, 71, 72	
		Group 1 Tuakana & Teina: 61, 62, 63, 64		Group 1		Group 1	
		Group 2		Group 2 Tuakana & Teina: 65, 66, 67, 68		Group 2	
		Group 3		Group 3		Group 3 Tuakana & Teina: 69, 70, 71, 72	

(Shaded areas indicate when treatment received)

After the intervention at the end of Term 4, post intervention interviews of teachers and tuākana, evaluation, and other comparison data collection occurred.

At the beginning of stage 3 in 2006, the researcher analysed the results from 2005 and, in collaboration with the teachers, reflected on the processes and procedures undertaken, and refined the approach where necessary.

Collaboration with teachers

The notion of collaboration was discussed with the teachers. The teacher ‘pairs’ agreed to work collaboratively with each other, and with the researcher throughout the course of the study, but particularly during the implementation phase of the ‘TALES’ tuakana – teina oral language programme in their particular classrooms.

In 2005 in collaboration with the researcher, the teachers agreed to:

- Develop a Tuakana – Teina Peer Tutoring Action Plan that described the intervention and guided the implementation of the programme within their particular classrooms
- Identify and select the students to be involved in the study
- Match the tuākana (tutors) and teina (tutees), considering both academic and social needs
- Initially observe, then take responsibility for the tuakana training sessions, and for monitoring their implementation
- Record anecdotal observations throughout the course of the study
- Provide opportunities for the programme to occur for 30 minutes per day, every day, for no less than eighteen weeks
- Share responsibility for planning, implementing and monitoring the programme, including tuakana feedback and feed-forward sessions

In line with participatory action research practices (Tilakaratna 1990; Berryman 2007) the teachers of the tuākana and teina worked with the researcher and key teachers to create a TALES collaborative organizational action plan for TALES implementation (See Appendix 6: Collaborative Action Plan for an example of a collaborative action plan). It was evident from these collaborative action plans

that the roles were shared, and that the researcher was an active participant who, to all intents and purposes, was considered as another 'key teacher'.

The researcher and the key teachers assigned student participants randomly to the three groups, and assigned the tuakana – teina pairs. While random placement was achieved for the most part, differing numbers of students in the junior classes, and differing numbers of students for whom permission to be involved had been obtained, necessitated a departure from random placement in a few cases (5 out of 144).

The teachers negotiated the days and times the TALEs sessions would occur. Renegotiation of days and times occurred during the intervention stages in some cases. In the main, the tuākana worked with their teina for half an hour, four times per week, for six to seven weeks. Occasional variations to this scheduling occurred when unplanned interruptions occurred, such as illness, and sporting or cultural events. It was agreed that a tuakana session with the key teacher and/or researcher as key teacher, would occur once per week for half an hour.

Training of tuākana

The senior class teachers and the junior class teachers agreed to participate in the training during the implementation phase (See Appendix 6: Collaborative Action Plan, pp 4-5). They agreed that the researcher would model the training and then the teachers would take responsibility for the training of tuākana with support from the researcher. The researcher particularly encouraged the senior class teachers to be involved in the training, even though the programme occurred within junior classes in all but one case. The teachers negotiated who would take responsibility for training, and when they would do the training. All tuākana involved in the programme in 2005 and 2006 were initially trained by the researcher.

Two sets of three groups of tuakana – teina pairs from School A and School B were trained in 2005. Four sets of three groups of tuakana – teina pairs from School A and School B, plus the additional pairs from School C and School D trained in 2006. Over all, six sets of three groups of tuakana – teina pairs

participated in the research study. The introduction of training was staggered over three phases, with each phase planned to last for approximately six weeks. However, this time varied due to a range of interruptions such as influenza, class camps, sporting and cultural events. The training was planned for two one-hour sessions over two consecutive days. In collaboration with the key teachers the researcher extended the training programme, due to the specific needs of each training group, and provided additional practice time and feedback as necessary.

The training programme included modified and refined components of an earlier study involving the implementation of TALES, (Grant 2002). The first training session focused on developing tuākana understanding of the concepts of whanaungatanga, tuakana – teina and *ako* relationships through discussion, and also focused on, the importance of learning and teaching at the same time. Tuākana were asked to reflect on how they felt when they first started school, whether they had friends or family at school when they started, and whether these friends and family were helpful. The importance of talking and conversation to facilitate learning, and to develop positive relationships were also discussed. It was explained to tuākana that their main goal was to have fun with their teina, and encourage them to “talk more” within natural conversations, without an over reliance on *asking questions* to achieve this. The trainer (key teacher and/or researcher) stressed the need to “give over” language by modelling it through talking “heaps” to the teina before being able to expect to “get back” language. It was also stressed that initially the teina may be shy of the tuākana, and may not talk to them very much, and that a major part of the tuākana role was to make sure that they were friendly towards their teina so that they would feel comfortable with them.

The ‘TALES Toolkit’

The trainer introduced the tuākana to the ‘TALES Toolkit’ (adapted from Grant, 2002), (See Appendix 1: ‘TALES Toolkit’). The ‘TALES Toolkit’ includes guidelines under each of the following five headings T – (Talk), A – (Ask), L – (Listen), E – (Encourage), S – (Say). These headings are a set of prompts designed to assist the tuākana to help their teina to talk more and acquire oral language. As reported in Chapter 2, the ‘TALES Toolkit’ was constructed on the basis of

findings from the literature identifying good practice in fostering oral language acquisition (See Table 10). The ‘TALES Toolkit’ places strong emphasis on Krashen’s (1987) six conditions for optimal language input, and, on active listening techniques.

The tasks, and the processes underlying the tasks, are made explicit in the ‘TALES Toolkit’ and training. The trainer stressed that there was no particular order among the ‘TALES Toolkit’ components that the tuākana must follow. Rather, the ‘TALES Toolkit’ was to help them remember useful ways to get their teina talking and acquiring more language. The emphasis is on talking and having fun.

Table 10
‘TALES Toolkit’ components and supporting literature

‘TALES Toolkit’ Component	Supporting literature
<p>T – TALK includes:</p> <ul style="list-style-type: none"> • Greeting them politely • Use manners talk like “Please”, “Thank you”, “You’re welcome” etc. • Talking lots and lots about things you think might be interesting to them • Making lots and lots of comments about what both are doing as you are doing it • PAUSING and giving them the opportunity to respond • Remember the five finger rule (Adapted from HPP (Atvars, Stock & Pinfeld, 1999)) ‘TALK, TALK, TALK, ASK, LISTEN’ 	<p>Optimal input should provide tools to help students obtain more input / tools for conversational management (politeness formulae) (Krashen 1987)</p> <p>Optimal input is interesting and relevant and should be in sufficient quantity (Krashen 1987).</p> <p>Delay responding, allow time to initiate (Glynn et al., 2006).</p>
<p>• A – ASK includes:</p> <ul style="list-style-type: none"> • Asking what they want to do or play with • Remember to only ask a question if you have already spent a lot of time talking together, and you know the teina can answer • If they don’t seem to like it when you ask questions ...don’t • If they do seem okay with questions you might ask questions about what they are doing, have done, like doing etc. • If they do answer your questions ask them questions that encourage them to talk more (what, where, why, how, when etc) • If they don’t seem to understand something you say ask them to signal or tell you that they don’t understand • Check for understanding e.g., Do you understand? 	<p>Optimal input should not put students on the defensive (Krashen 1987)</p> <p>Optimal input should be in sufficient quantity (Krashen 1987)</p> <p>Optimal input is comprehensible. Comprehension checking strategies are recommended (Krashen 1987)</p>
<p>L – LISTEN includes:</p> <ul style="list-style-type: none"> • Listen to them when they are talking to you. • Look interested • Smile and be encouraging • Make sounds that show you are listening like “Uh huh”, ‘mm”, “okay”, “yeah” etc • Make sure your ‘body language’ shows you are listening (looking at them, nodding/shaking head etc) • If they don’t want to talk...don’t try to make them. just keep talking about what you are doing, continue to be friendly and comment about what they are doing 	<p>Responsive social contexts provide opportunities for learners to initiate (Glynn et al., 2006)</p> <p>Bishop and Glynn (1999) reinforce the need for a skilled listener and commentator in narrative approaches to classroom conversations.</p> <p>Optimal input should not put students on the defensive (Krashen 1987)</p>

<ul style="list-style-type: none"> • E – ENCOURAGE includes PRAISE: • Encourage them to ‘talk more’ • If they are happy talking and comfortable asking questions use: What, where, how, why and when questions • Remember to keep talking in a friendly and relaxed way even if they don’t want to talk or answer questions • Make lots of positive comments about what they are doing, or something that you have noticed or heard about them (might have run a fast race, or look like they have got something new etc) 	<p>Optimal input must be in sufficient quantity and should not put students on the defensive. Optimal input should be interesting and relevant (Krashen 1987)</p>
<ul style="list-style-type: none"> • S – SAY includes: • Say their name throughout the session • Say goodbye at the end of the session • Remember to use their name when you say goodbye • Let them know by the way that you say goodbye that you really liked being with them, and are looking forward to seeing them again 	<p>Optimal input should provide tools to help students obtain more input/tools for conversational management (politeness formulae) and should not put students on the defensive (Krashen 1987)</p>

Adapted from Grant 2002

The trainer modelled live what the different components of the ‘TALES Toolkit’ looked like and sounded like for the first group of tuākana. In subsequent training sessions, the group already involved in the programme assisted the trainer in role playing and modelling the components for the following group of tuākana. Hattie and Timperley (2007) refer to the potential effectiveness that modelling by capable peers can have. At the end of the first session the tuākana were encouraged to take their copy of the ‘TALES Toolkit’ home with them to read and think about.

The second training session revisited the ‘TALES Toolkit’ and the main goals. The trainer asked the tuākana, on a voluntary basis, to recall the goals and the main components of the ‘TALES Toolkit’. The tuākana took turns practising facilitating conversations in pairs using the conversation props provided.

Conversation props / materials / activities

Krashen (1987) suggests that optimal input requires conversational props. Glynn et al., (2006) cite Glynn’s earlier (1985) work that promotes the importance of providing interesting materials. McNaughton (2002) when describing activities at the core of the ‘socialisation morel’ which is used as a framework to describe how literacy happens, states:

Activities are structured events. Activities have goals, and the participants' actions within the activities are directed towards these goals. There are known patterns of action within activities, but they allow for dynamic variations in participation. A basic assumption about the nature of activities is that if activities are to be the means for learning and development, the participants must come to have shared understandings about the goals of, and ways of acting in, these activities.

(McNaughton, 2002, p. 23)

McNaughton (2002) also suggests that “highly versatile activities have great potential for making connections between teachers and culturally and linguistically diverse learners” (p.50).

The tuakana - teina pairs accessed containers of toys and art activities as props for their conversations. The trainer introduced the types of props that the tuakana – teina pairs might use and asked the tuākana to think of other props that might support the conversations. The researcher provided thirteen large rolling plastic bin containers that included toys, play dough, and play dough equipment. One of the key teachers provided three large rolling plastic bin containers that included more toys (See Table 11). The researcher provided the play dough for most of the sessions although two key teachers in two schools also provided play dough at times. Each tuakana – teina pair had a container. Each day, tuākana were expected to rotate the containers so that the pairs had a different set of props for their conversations each day of the week. At the beginning of the study, one of the key teachers decided to number the containers in the class to avoid confusion and controversy over which pair had which container each day. The researcher subsequently numbered all of the containers. During feedback and feed-forward sessions across schools in 2006, tuākana indicated that they wanted a greater variety of props. The researcher agreed and she rotated the containers between schools on a regular basis, and aimed to do this every week.

Table 11
Contents of conversation prop containers

Container	Contents
1	Play dough and play dough equipment. Electronic cash register and a sixty piece play food set, and, Mini fishing game.
2	Play dough and play dough equipment. Knight Pirate Formula Race set, and, Mini fishing game.
3	Play dough and play dough equipment. Die cast tough truck play set (forty two piece), and, Mini fishing game.
4	Play dough and play dough equipment. Emergency rescue play set (sixty piece), and, Mini fishing game.
5	Play dough and play dough equipment. Electronic cash register and a sixty piece play food set, and, Magnetic drawing board.
6	Play dough and play dough equipment. LEGO
7	Play dough and play dough equipment. Garage with cars and trucks
8	Play dough and play dough equipment. Farm animals with fences
9	Play dough and play dough equipment. Wildlife animals
10	Play dough and play dough equipment. Kitchen equipment with dining utensils and food
11	Play dough and play dough equipment. Kitchen equipment with dining utensils and food
12	Play dough and play dough equipment. Dinosaurs
13	Play dough and play dough equipment. DUPLO
14	Play dough and play dough equipment. Castle with 'Beauty and the Beast' characters
15	Play dough and play dough equipment. K'nex (a construction activity)
16	Play dough and play dough equipment. K'nex (a construction activity)

It appears that the activities planned for in this research study are appropriate for supporting the transfer of learning described by McNaughton (2002):

Effective connections for the learner happen when the activities in an (often unfamiliar) instructional programme incorporate features of some familiar expertise that up until then have been situated in out-of-school activities. Transfer of learning occurs as a consequence of this incorporation - bridges between the familiar and the unfamiliar can be made both by the learner and by the teacher.

(McNaughton, 2002, p. 27)

The tuakana training included how to summarize what the pair talked about on the tuakana summary sheet on the back of the tuakana checklist at the end of the session (See Appendix 7: Tuakana checklist and summary sheet).

Weekly tuakana checklist and summary sheet and formative assessment

The trainer introduced the tuākana to their plastic 'tuākana briefcases' that included a laminated 'TALES Toolkit' sheet, a tape recorder, a blank tape, a

weekly checklist and summary sheet (See Appendix 7: Tuakana checklist and summary sheet), a pen to complete the checklist and summary sheets, and, stickers to give to their teina at the end of each session. The tuakana checklist and summary sheet was designed to provide information for feedback, including cues about the processes that the tuākana needed to follow to fulfil the requirements of the TALEs procedure that they were learning to implement. The trainer fully explained how to use all items on the checklist and summary sheet, with the understanding that the tuākana would receive support, if required, from the researcher and/or teacher, to complete the checklist and summary sheet. The trainer emphasised that accurate spelling was not considered as essential. However, the tuākana were expected to think carefully and answer honestly rather than provide answers designed to please the key teacher. Tuākana were encouraged to discuss the components included in the checklist and summary sheet with their teina as they worked through it. While the tuakana checklist and summary sheet served mainly as a prompt for components of TALEs, as well as a written record of what was talked about, a section for personal goals included in the checklist and summary sheet enabled a formative assessment strategy to be incorporated into the study. The trainer introduced the notions of learning intentions and success criteria. Learning intentions were framed as “This week I am learning to...”, and success criteria were framed as “I will know I have learned this when ...” The trainer informed the tuākana that they would establish their learning intentions and success criteria in collaboration with the key teacher and/or researcher in response to, and after reflection on, information gleaned from the five minute probes from the previous weeks tapes of the TALEs sessions. A section titled ‘other comments’ provided an opportunity for written feedback at the bottom of the tuakana checklist and summary sheet.

Audio tape recording

The researcher provided each tuakana with a tape recorder and blank tapes to record each TALEs session. The tuākana were taught how to use the tape recorder and speak their name and the date on the cassette tape, and in writing on the cassette. The researcher labelled each cassette holder with the school number (e.g., SA), the group number (e.g., G1), the pair number (e.g., P1), the week number (e.g., W1), and the year (e.g., 05). A different colour was used to label

each group's cassettes, and would include all the information required to identify the cassette (e.g., SA G1 P1 W1 05). Throughout the three phases of the intervention the researcher collected tape recordings and observations of sessions for analysis at approximately weekly intervals. This provided evidence for the feedback procedure as well as a way to assess treatment integrity.

Weekly tuākana sessions

It was planned that each group of tuākana met weekly with the junior class or senior class key teacher and/or the researcher, for half hour 'narrative dialogue', 'learning conversation', 'feedback feed-forward' sessions. This process continued for approximately six weeks. The intention was for the key teachers to be involved in this process in 2005 and 2006. All of the key teachers held senior management positions and volunteered to use part of their teachers release time to be involved in these meetings at times agreed to in the action plan. The key teachers, including the researcher as a key teacher, negotiated which key teacher would take responsibility for this and for how long, and when. In 2005 the researcher as a key teacher agreed to take responsibility for listening to the tapes and facilitating the sessions with the other key teachers involved when possible.

The tuākana sessions provided opportunities for "feed up", "feedback", and, "feed- forward" as described by Hattie and Timperley (2007). The sessions were 'two-way', demonstrating the principles of *ako*, with the tuākana keeping the key teacher, and/or the researcher, informed of difficulties, and making suggestions regarding the programme, as well as reflecting on their own practice and implementation of the programme. The importance of conversations that provide opportunities for power sharing within the relationship between students and teachers, as well as providing a spring board for feedback and feed-forward, is highlighted in the literature (Bishop and Glynn 1999; Te Kete Ipurangi 2008a, 2008c). This is also highlighted by the Ministry of Education (2008b). Five minute probes of the weekly tape recordings for each tuakana were listened to, in order to identify areas that were going well, and TALES components that might need greater focus. Sometimes the group listened to probes from the tape recordings, as described by ten Have (1998) in Silverman (Silverman 2003). The information from the five minute probes and the tuakana checklist and summary

sheets served as a basis for reflection within the group, and new learning intentions and success criteria were established. These were recorded on the following week's weekly tuakana checklist and summary sheets (See Appendix 7: Tuakana checklist and summary sheet).

In summary, the training and ongoing feedback and feed forward sessions require input from the teachers. Table 12 gives an overview of the training and feedback requirements.

Table 12
Overview of the training and feedback requirements

TRAINING	Equipment and materials needed for the training programme	Containers (Enough for one container per pair) Folders for Tuākana Toys Activities } (See Table 11) Play dough } Stickers Tapes Tape recorders Tuakana checklist and summary sheets
	Who trained the tuākana?	Researcher with support from the tuākana teacher and/or teina teacher. Due to the multiple baseline approach there were three phases with training sessions for each phase. The teachers were expected to take more responsibility for training at each phase with the researcher providing support.
	When did the training commence? Length of each training session Length of training programme	At the beginning of each phase 1 hour 2 days
FEEDBACK	Equipment and materials needed for the feedback and feed forward sessions	Tuākana folders Weekly tape recordings for each pair 1 tape recorder to play five minute probes Tuakana checklist and summary sheets
	Who facilitated the feedback and feed forward sessions?	The teacher identified in the Collaborative Action Plan was expected to take responsibility for the the feedback and feed forward sessions with support from the researcher.
	When did the feedback and feed forward sessions commence? Length of each feedback and feed forward session	Week 1 of the programme (Date and time negotiated between teachers) ½ an hour per week for 6 weeks.

Stage 3

Reflecting and refining

At the beginning of 2006, the researcher invited all of the participating teachers to attend an information sharing morning. The researcher gained permission from each school principal for the release of all the teachers involved. The key teachers in each school took responsibility for organizing the release. The researcher and the teachers involved in the study in 2005 shared their experiences from that year's implementation and discussed the areas that needed to be refined. The researcher facilitated a discussion about the importance of the teachers having 'ownership' of the programme, and being active participants within the research study. The logistical challenges of data gathering, implementing and monitoring the programme and study across four schools were discussed. The researcher reinforced the potential value of teachers listening to five minute probes of the tapes as an assessment tool, so that they would gain greater insight into the conversational and social competence of the students that would inform their teacher practice. The researcher also promoted the taping of weekly sessions between the tuākana and the key teacher for teacher reflection purposes, as well as providing an additional means of assessing the usefulness of the five minute probes as a formative assessment tool. Collaborative Action Plans were developed with the teachers involved in each school in 2006 (See Appendix 6: Collaborative Action Plan for an example of a collaborative action plan).

MEASURES

Data were collected from and with all students and key teachers involved in the research study. Both quantitative and qualitative measures are relevant in this study as the questions posed are of both kinds. The questions relate to different groups of participants (teina, tuākana, key teachers) and require different and sometimes combined measurement approaches to answer them adequately. The measures used include:

(A) Quantitative measures

a) Measures of treatment implementation and integrity

1. Percentage of non-Māori, Māori, and other, participants
2. Percentage of female and male participants
3. Number of TALEs sessions attended
4. Number of TALEs sessions audio taped
5. Number of words spoken from 36 five minute probes (1 per week for 6 weeks) of audio tape recorded conversations by six tuakana - teina pairs selected by stratified random sampling
6. Occurrence rate of the five TALEs components from the 36 five minute probes (1 per week for 6 weeks) of audio tape recorded conversations by six tuakana - teina pairs selected by stratified random sampling
7. Number of tuakana checklist and summary sheets completed by the six tuākana selected by stratified random sampling

b) Measures of oral language outcomes (Teina)

1. Junior Oral Screening Tool (JOST) (Ministry of Education, 2003c). In the context of this study, the Junior Oral Screening Tool (JOST) is a quantitative measure that was familiar to the teachers involved and provided a helpful means of measuring quantitatively, changes in the junior class participants' knowledge and use of language over time. It was compiled by the Ministry of Education (2003c) who argue the need to:

...meet the expressed need of teachers who require more information on children's oral language.

The aim is to give teachers useful information around which they can:

- Build a programme
- Group children appropriately for language groups

- Make a decision about referral to a Speech-Language Therapist.

We suggest you use this with children whose oral language is of concern and/or who score poorly on the Record of Oral Language. It is intended for use with five-year-olds but is also suitable for older children where appropriate.

There are three sections:

- Vocabulary
- Pragmatics (social language)
- Grammar.

Speech sounds are not included.

The main focus [in this programme] is on expressive language, as understanding of concepts such as colour, shape and size will be evident through other curriculum activities. This information should be considered together with the results from the J.O.S.T. Information gained should be useful for planning further classroom activities...

There are no pass or fail criteria. Most items have been based on normed tests in the 4.6 – 5.6 year level. J.O.S.T.'s intent is to gain information to decide how to help each child access the curriculum.

(Ministry of Education, 2003c, p 2, 3)

The potential total score in the original assessment was 64. This research study excluded six subjective components of the pragmatics section of JOST (initiates conversation – children [1], - adults [2], participates in group discussions: what [3], where [4], why [5], when [6]). Similar interpersonal skills are covered in the analysis of the five minute probes, leaving a potential score of 58.

2. Record of Oral Language (ROL) (Clay et al., 1983). The Record of Oral Language (ROL) was developed by Clay et al., (1983) in response to the lack of procedures available to teachers to make objective assessments of changes in a child's oral language over time. The procedures they developed were intended to help teachers identify the basic grammatical structures understood by the child with the aim of assisting the development of more complex structures. They state that "A young child is unlikely to understand the fine points of the English language until he has mastered the more common structures" (Clay et al., 1983, p. 12). In the context of this research study the Record of Oral Language (ROL) is another assessment tool that is familiar to the teachers involved, and provides a helpful vehicle for measuring quantitatively, changes in the junior class participants':

In general, children scoring below 13 will so far have acquired only a limited control over the structures of oral English (Foot note: They will be more than one standard deviation below the average score for our normative sample). They will be likely to have difficulty in following all but the simplest form of instructions given by the teacher and in following a story

read to the class. These children should be considered for special attention in oral language development.

(Clay et al., 1983, p. 29)

The potential score was 42.

3. Auditory – Vocal Association Assessment (AVA) (Adapted from McCarthy & Kirk (1961) as cited in Specialist Education Services, n.d.). According to the administration section of this AVA tool “This assessment employs ability to comprehend verbal analogies as an indicator of the child’s level of verbal attainments. Responses are elicited by controlled association.” (Special Education Services, n. D., p. 1). This tool was selected due to its familiarity to one particular teacher who had requested its use in a previous study (Grant, 2002), and lends itself to comparison of results across the two research studies, as well as across a greater range of settings within the context of this research study. Again, AVA provides another quantitative measure familiar to the teachers involved, and provides a helpful vehicle for measuring quantitatively changes in the junior class participant’s knowledge and use of language over time. Information given by the Special Education Service suggests that a referral to their service may be considered if the score is 4 or below (See Appendix 8: Auditory – Vocal Association Assessment of Verbal Attainments). The potential score was 26.

School Entry Assessment (SEA) (Ministry of Education, 2001)

Serious consideration was given to using in this present study the ‘Tell Me’ component of the Ministry of Education’s ‘School Entry Assessment’ (SEA) tool as a means of measuring oral language development over a period of time. This tool is child centred, and in addition to locating assessment within meaningful contexts it also “emphasizes process as well as product” (Anderson, Lindsey, Schultz, Monseur, & Meiers, 2004, p.1). In 2001 the Ministry of Education contracted the Australian Council for Education Research to evaluate the technical and methodological aspects of the School Entry Assessment kit. The potential usefulness of the oral language ‘Tell Me’ assessment component was identified. However Anderson et al., (2004, p.1) also found that “A quantitative evaluation of the SEA data schools supply to the Ministry of Education revealed problems of

within-school sample bias and problems of whole test reliability for the Tell Me component of the SEA, caused by the design of this component”. The Ministry of Education (2007d), in their review of SEA voiced concern that the ‘Tell Me’ task required “complex scoring and fine judgements about the adequacy of students’ responses” and that “The tasks [of SEA] may be relatively time consuming to administer and the limited attention span of some 5-year-olds may be a consideration” (Ministry of Education, 2007d, p. 78).

Some of the teachers participating in the present study expressed mixed feelings about the complexity and time taken to administer the Tell Me assessment component of SEA, and were not sure how useful it would be to this research study. In light of this and the findings of Anderson, et al., (2004) it was decided not to use this Ministry of Education oral language assessment tool.

McNaughton, MacDonald, Barber, Farry, and, Woodard (2004) identify some difficulties encountered when using ‘Elicited Conversations’ and ‘Kii Mai’ as methods of assessing language. Kii Mai is a structured retelling task that parallels the Tell Me assessment from SEA from which AKA was “specifically designed for Māori medium” (McNaughton et al., 2004, p. 57). The Elicited Conversation measure was designed as a less formal conversational format than Kii Mai, and the children were assessed using an adapted version of the procedure used for scoring Kii Mai. The Elicited Conversation measure employed a “narrative starter” which typically took the form of questions such as “E hia ou tau? How old are you? I mahara koe I tōu ra huritau? Do you remember your birthday (party)?” (McNaughton et al., 2004, p. 57). It is interesting to note the impact that this emphasis on questions as narrative starters may have had on the children’s responses when Krashen’s (1987) concerns about putting children on the defensive are considered. McNaughton et al., 2004, p. 60 state: “Several children did not offer anything in response to the kii mai and elicited conversation task, i.e., “The child said nothing””. While all twenty four students responded the first time the measures were used, eight of the twenty four students involved said nothing the second time the language measures were used. They state: “An interesting feature for the conversation measure was children not responding to the conversation task at 6.0 years where they had responded well at the earlier time point. This may reinforce earlier suggestions that this may reflect the

generally more difficult nature of the conversation task” (McNaughton, et al., 2004, p. 64). However, the non responsiveness occurred in the Kii Mai assessments also, reinforcing the difficult challenge of finding culturally appropriate oral language assessment tools.

(B) Qualitative measures

a) Measures of treatment implementation and integrity

1. Sections of 36 transcripts (1 per week for 6 weeks) of audio tape recorded conversations by six tuakana - teina pairs selected by stratified random sampling, demonstrating examples of the learning intention being met, tuakana effectiveness and fidelity to TALEs goals and components
2. Sections of transcripts from audio tape recorded conversations between tuākana and the key teachers and/or researcher, demonstrating examples of feedback and feed-forward, and tuakana effectiveness and fidelity to TALEs goals and components
3. Examples from tuakana checklist and summary sheets demonstrating key teacher feedback, and the usefulness of the tuakana checklist and summary sheets as a support for treatment integrity

b) Measures of tuakana outcomes

1. Pre treatment anecdotal description of tuākana and their main learning intention
2. Comparison of the pre- and post-treatment anecdotal description of tuākana and whether their main learning intention has been achieved
3. Examples of tuakana checklist and summary sheets demonstrating tuakana reflection

c) Measures of tuakana and teina outcomes

1. Key teachers and researcher anecdotal observations
2. Parents/caregivers anecdotal observations

Treatment integrity

Participants

A total of 72 teina students identified by the key teachers as having low levels of oral language development, and 72 tuakana students identified by the teachers as experiencing learning, social, and/or behaviour needs, from four schools, were randomly assigned to three groups by the key teachers and researcher. As this study is focussed on improving outcomes for Māori students, the ethnicity of the students was established to determine the percentage of non-Māori and Māori participants. The percentage of male and female participants was established to assess gender balance.

Tuakana and teina attendance at TALES sessions

It was planned that each group of teina would receive the programme four days per week for six weeks, making a potential total of 24 sessions in treatment. Tuakana and teina attendance at TALES sessions' data was gathered by the researcher from the tuakana checklist and summary sheets. The attendance information is reliant on the accuracy of the tuākana completion of the tuakana checklist and summary sheets. Therefore this information may not be totally reliable. Attendance data may, however, provide a general approximation rather than an accurate indication of TALES session occurrence. The mean estimated attendance was analysed within and across schools.

Audio cassette tape recording and transcript analysis

Silverman (2003), drawing on earlier work (1998), suggests that there are three ways of analysing conversation:

How to do conversation analysis:

1. Always try to identify sequences of related talk.
2. Try to examine how speakers take on certain roles or identities through their talk (e.g., questioner/answerer or client-professional).
3. Look for particular outcomes in the talk (e.g., a request for clarification, a repair, laughter) and work backward to trace the trajectory through which a particular outcome was produced.

(SOURCE: Silverman (1998a) in Silverman, 2003, p. 357)

The taped conversations in this research study came from a variety of sources and serve different purposes. Therefore the way they are analysed varies accordingly. The key teacher, and/or researcher as key teacher, used five minute probes of the

audio taped conversations as a formative assessment tool, as well as a basis for weekly collaborative reflective feedback/ feed-forward sessions with the tuākana. Some of these sessions were also taped.

Conversations between tuākana and teina

Audio tape recording of all in-class tuakana and teina TALES sessions

Language interaction between the tuakana-teina pairs was taped by the tuākana in each TALES session. In each school the three groups of four pairs ($3 \times 4 = 12$) were expected to have at least one tape per week for six weeks ($12 \times 6 = 72$). This would constitute a potential 144 tapes collected from two schools (School A and School B) in 2005, and a potential 288 tapes collected from all four schools (School A, School B, School C, and School D) in 2006. The combined total of tapes for both years was thus 432.

Detailed analysis of six randomly selected tuakana and teina pairs

One tuakana – teina pair from each school, each year, was randomly selected for detailed analysis of transcribed five minute probes of taped tuakana and teina TALES sessions. The random selection used in this research study is more accurately called stratified random sampling (Bradley and McClelland 1978) in that the samples were randomly selected only from those pairs who had at least one taped session from each week for at least six weeks, and, only if the date and names were accurately recorded on the tape. The number and percentage of the total number of pairs this applied to were recorded to demonstrate that selection factors do not cause disproportional representation.

Quantitative data were gathered from the transcripts (See Appendix 9: Transcript analysis template). The first five minutes of one tape per week, for the six weeks for each of the randomly selected tuakana and teina pairs, was transcribed to provide continuity of sampling. This generated a total of 36 transcripts. In cases where one of the tuakana and teina pair left the room, or the pair's conversation was interrupted for a long period of time, the amount of time taken was added to the end of the transcript.

Each transcript was analysed to establish the number of words spoken by the teina, and the number of words spoken by the tuākana. The transcripts of taped conversations between the tuākana and the teina allowed for an analysis of the tuākana use of the TALES components, which provided treatment integrity information. ‘TALES Toolkit’ components were identified in the transcripts as being a T, A, L, E, or S component and the number of words or instances of occurrence were counted.

Talk: All words spoken were counted.

Ask: All words posed as a question were counted.

Listen: A score of 1 was given if the tuakana responded directly in response to a question posed by the teina, or the teina saying their name. Body language that demonstrated active listening could not be counted.

Encourage: A score of 1 was given if the tuakana used a ‘what’, ‘where’, ‘why’, ‘how’, or, ‘when’ question, or if the tuakana praised the teina. Body language or tone of voice that might demonstrate encouragement could not be counted.

Say: A score of 1 was given each time the tuakana said the name of the teina.

The number of words spoken by others was also counted if they were directly engaged in conversation with the pair selected by stratified random sampling, or if the words spoken by others influenced the words spoken by the pair.

The number of words posed in questions was counted, as were the total number of words spoken. These data provide information about the balance of input in the conversations between the tuākana and the teina (i.e., information on power sharing and reciprocity). The number of combined ‘Talk’ and ‘Ask’ words spoken by the tuākana and the teina at the beginning of the intervention were compared with the number of combined ‘Talk’ and ‘Ask’ words at the end of the six week intervention. The data also provides information about the ability of the teina to access more information through questioning.

Qualitative analysis of the transcripts of the taped tuakana-teina sessions include examples of points of interest, particularly in relation to the personal learning intentions of the randomly selected tuākana; the ‘number one goal’ of TALEs to get the teina to ‘talk more,’ and, the ‘number one rule’ of TALEs to ‘have fun’ when using the TALEs components.

Conversations between tuākana and the key teachers and/or researcher

Audio tapes of key teacher and tuakana feedback and feed-forward sessions

It was planned that each week the tuākana and a key teacher would participate in a feedback and feed-forward session designed to incorporate feedback best practice as described in the literature (Clarke et al., 2003; Hattie, 1999), and reflect the narrative pedagogy described by Bishop and Glynn (1999). The feedback and feed-forward learning conversations were to be informed by the five minute probes from the tapes of TALEs interactions between each tuakana teina pair. The key teachers agreed to listen to five minute probes of each tuakana teina pair each week and make notes about what they had heard. The sessions were to include analysis of the five minute probes listened to for feedback and feed-forward in relation to the learning intentions and success criteria of the individual tuakana, and implementation of the TALEs procedure. In 2006 the key teachers agreed to tape the tuākana sessions and use the tapes for reflection, and to capture examples of the usefulness of the five minute probes as a formative assessment tool. The number of tapes out of the potential number of sessions was counted.

The researcher selected the first session that the randomly selected tuakana teina pairs were involved in, that was facilitated by the key teacher. Transcripts of this session provided more detailed analysis regarding the establishment of learning intentions and success criteria, directly linked to each tuakana teina pair. The researcher transcribed the sections of sessions that provided snapshots of the principles of *ako* occurring to illustrate examples of types of *ako* occurrence rather than simply recording the number of times *ako* occurred. Similarly, snapshots of learning intentions and success criteria being discussed and established by the key teachers and the tuākana were used to demonstrate examples of types of occurrence rather than simply the rate of occurrence.

Tuakana checklist and summary sheets – formative assessment

The tuākana were expected to complete items on the weekly tuakana checklist and summary sheet at the end of each tuakana – teina session (See Appendix 8: Tuakana checklist and summary sheet). The number and percentage of checklists completed by the six randomly selected tuākana were counted. Examples of information pertinent to learning intentions, tuākana reflection and feedback, as well as TALES treatment integrity have been included where appropriate. Examples of the usefulness of the tuakana checklist and summary sheet are noted.

Anecdotal observations

The literature has identified concerns regarding the objectivity of anecdotal observations. Denzin and Lincoln (2003) discuss the ethical difficulties associated with observational ethnography and state that:

All observation involves the observer's participation in the world being studied. There is no pure, objective, detached observation; the effects of the observer's presence can never be erased. Further, the colonial concept of the subject (the object of the observer's gaze) is no longer appropriate. Observers now function as collaborative participants in action inquiry settings. Angrosino and Pérez argue that observational interaction is a tentative, situational process. It is shaped by shifts in gendered identity as well as by existing structures of power. As relationships unfold, participants validate the cues generated by others in the setting. Finally, during the observational process people assume situational identities that may not be socially or culturally normative.

(Denzin & Lincoln, 2003, p. 49).

One of the key differences between quantitative and qualitative research methodologies lies in the types of research questions they are each able to handle best. Quantitative questions depend on an “objective” or “distanced” relationship between the researcher and the researched, with the researcher largely determining the specific framing of the research questions, and what counts as data to answer these questions. Qualitative questions typically focus on understanding the experience, values, and feelings of other people. These questions depend on a “trustworthy” collaborative relationship between the researcher and the researched, with the framing of the research questions and decisions about what counts as data being shared between the researcher and the researched in a collaborative partnership.

Angrosino and Mays de Pérez (2003) cite Adler and Adler (1994) who suggest that as “part of a methodological spectrum” observation may serve as “the most powerful source of validation” (Angrosino & Mays de Perez 2003, p. 108). In this research study the participants function as “collaborative participants in action inquiry”, and as such, incidentally reported anecdotal (subjective) observations relevant to the research study. The information provided was recorded and reported as pertinent.

The key teachers’ rationale for selecting the tuākana was anecdotal and is included as the overall learning intention or goal for the individual tuākana selected for more detailed analysis. The success criteria are directly linked to the learning intention and examples, and evidence of the learning intention being met are provided. The five minute probes, pertinent transcripts of key teacher and tuākana conversations, and anecdotal observations are used to assess and demonstrate whether or not the learning intention has been successfully met. Examples or evidence of the usefulness of the five minute probe for the purpose of formatively assessing the learning of tuākana during their involvement in TALES are noted.

Parent/Caregiver feedback and feed-forward

Conversations with parents/caregivers are included within the qualitative section of the research study. Parents were invited to take part in the group parent interviews that were to be conducted pre-intervention (the initial hui) and post-intervention (the conclusion ‘party’). The discussions were informal and not tape recorded. Notes were taken of some comments pertaining to the influences of the programme noted by parents, and are considered as qualitative information.

CHAPTER 4: FINDINGS

Treatment Integrity

Participants

144 students (72 teina and 72 tuākana) from four schools were assigned to three groups. Eighty seven percent (125/144) of these students identified themselves as Māori and thirteen percent (19/144) identified themselves as non-Māori. The mean percentage of students identified as Māori across the four schools in 2006 was 74.75 with a standard deviation of 18.75. Of the thirteen percent non-Māori students twenty six percent (5/144) identified themselves as from the Pacific Islands, sixty nine percent (13/144) identified themselves as Pākeha, and five percent (1/144) identified themselves as 'Other'. Eighty three percent (60/72) of the teina students identified themselves as Māori and seventeen percent (12/72) of the teina students identified themselves as non-Māori. Three of the non-Māori teina students identified themselves as from the Pacific Islands, and, nine teina students identified themselves as Pākeha. Ninety percent (65/72) of the tuakana students identified themselves as Māori and ten percent (7/72) identified themselves as non Māori. Two of the non-Māori tuakana students identified themselves as from the Pacific Islands, four identified themselves as Pākeha, and one identified himself as 'Other'.

Forty nine percent (71/144) of the students were boys, and fifty one percent (73/144) of the students were girls. Forty three percent (31/72) of the teina students were boys and fifty seven percent (41/72) of the teina students were girls. Fifty six percent of the tuakana students were boys and forty four percent of the tuakana students were girls.

During the course of the study seven teina students moved from their respective schools and further data collection pertaining to them was not possible.

Tuakana and teina attendance at TALES sessions

The planned research design called for teina students to receive the programme four days per week for six weeks, making a potential total of twenty four sessions in treatment. The number of sessions achieved varied across schools due to non attendance, and school commitments such as sporting and cultural events.

Tuakana and teina attendance at TALEs sessions' data were gathered from the tuākana. According to the information provided by the tuakana checklist and summary sheets the total mean number of sessions attended by all the tuakana and teina pairs at TALEs sessions across schools were 12.26 out of a potential 24 sessions, with a standard deviation of 3.84. The total mean number of sessions attended by the six stratified randomly selected tuakana and teina pairs at TALEs sessions was 16 out of a potential 24 sessions, with a standard deviation of 3.52. As this attendance information was dependent on the tuākana completing the tuakana checklist and summary sheets, these data provide an estimate rather than accurate indication of TALEs session occurrence.

Audio tape recordings of all in-class tuakana and teina TALEs sessions

The mean number of tuakana and teina TALEs sessions taped across the schools was 56 out of a potential 72 taped sessions per school, with a standard deviation of 7.5 (See Table 13):

Table 13
Number of tuakana and teina TALEs sessions taped from four schools³

School	Total
School A 2005	58
School A 2006	47
School B 2005	53
School B 2006	49
School C 2006	67
School D 2006	60
Mean	56
<i>Standard Deviation</i>	<i>7.5</i>

Potentially 72 tapes per school per year 6 weeks x 3 groups x 4 pairs @ 1 x tape per pair per week for 6 weeks

³ The number of TALEs sessions recorded on any one tape varied. Some sessions were not recorded (tuākana didn't push record; batteries were flat; tapes were put in incorrectly; tapes ran out and were not turned over).

Detailed analysis of six randomly selected tuakana and teina pairs

One tuakana – teina pair from each school, each year, was randomly selected for detailed data analysis. The random selection used in this research study is more appropriately called stratified random sampling (Bradley and McClelland 1978) in that the samples were randomly selected from only those tuakana – teina pairs that had at least one taped session from each week for at least six weeks, and, only if the date and names were accurately recorded on the tape. Twenty two out of seventy two tuakana – teina pairs had at least one tape per week for six weeks, nine pairs from Group 1, eleven pairs from Group 2, and two pairs from Group 3.

Table 14
Six pairs randomly selected for detailed analysis

School	Year	Group	Pair	Tuakana & Teina number	Year group	Gender	Ethnicity
A	2005	2	2	Tuakana 6	Year 6	Female	Māori
				Teina 6	Year 1	Female	Māori
B	2005	1	2	Tuakana 14	Year 6	Female	Māori
				Teina 14	Year 1	Male	Māori
A	2006	2	3	Tuakana 31	Year 6	Male	Māori
				Teina 31	Year 1	Male	Māori
B	2006	1	4	Tuakana 40	Year 6	Female	Māori
				Teina 40	Year 1	Female	Māori
C	2006	2	1	Tuakana 53	Year 6	Male	Pākeha
				Teina 53	Year 1	Male	Pākeha
D	2006	1	2	Tuakana 62	Year 6	Female	Pākeha
				Teina 62	Year 1	Female	Māori

Table 14 shows that seven of the twelve participating students were female (four tuākana and three teina). Nine students were Māori and three were Pākeha. The analysis of the performance of each of the six pairs selected by stratified random sampling from each school each year includes both quantitative and qualitative information which is now examined in detail.

Quantitative results

1. Treatment integrity

A five minute probe from one tape from each randomly selected pair, per week, for six weeks was transcribed. This made a total of thirty six probes transcribed. The first five minutes recorded on each tape was transcribed. The tape recorder counter was set at 000 at the beginning and at the end of five minutes the tape recorder counter read 100. In cases where one of the pair left the room, or where the conversation was interrupted for a long period of time, transcription continued until a five minute sample was obtained.

Each word spoken by the tuākana in the five minute probe was counted. If words were unclear the number of unclear words was recorded. There were a number of reasons for lack of clarity. These included: the tape recorder being too far away from the talkers, for example, the talker moving away from the tape recorder to get something; environmental noise, for example, play materials being tipped out of the container while talking; general classroom noise; or, poor articulation of the talker. As identified earlier:

- Talk:** All words spoken were counted.
- Ask:** All words posed as a question were counted.
- Listen:** A score of 1 was given if the tuakana responded directly in response to a question posed by the teina, or the teina saying their name. Body language that demonstrated active listening could not be counted.
- Encourage:** A score of 1 was given if the tuakana used a ‘what’, ‘where’, ‘why’, ‘how’, or, ‘when’ question, or if the tuakana praised the teina. Body language or tone of voice that might demonstrate encouragement could not be counted.
- Say:** A score of 1 was given each time the tuakana said the name of the teina.

The number of words spoken by others was also counted if they were directly engaged in conversation with the pair selected by stratified random sampling, or if the words spoken by others influenced the words spoken by the pair.

Table 15

Tuakana treatment integrity mean results from 36 five minute probes

	Unclear		Talk		Ask		Listen		Encourage		Say	
	Mean	<i>Std.D</i>	Mean	<i>Std.D</i>	Mean	<i>Std.D</i>	Mean	<i>Std.D</i>	Mean	<i>Std.D</i>	Mean	<i>Std.D</i>
School A: Tuakana 6 2005	1.5	1.37	422	125	102	50.9	43	50	11	3.5	4.33	2.73
School B: Tuakana 14 2005	1.33	1.5	248	131	26.3	9.16	13	5.7	4	2	3.67	1.51
School A: Tuakana 31 2006	5.16	3.65	263	93.7	70.8	39.8	12	4	3.8	2.2	2.83	3.25
School B: Tuakana 40 2006	4.16	1.94	172	87.5	29.5	16.4	22	10	2.5	1.4	0	0
School C: Tuakana 53 2006	5.66	1.36	293	22.1	51.7	24.3	26	7.6	3.3	2	1.67	1.86
School D: Tuakana 62 2006	2.16	0.98	277	35.9	86.3	27.8	22	8.5	9.83	5.7	0.33	0.52
Mean	3.33	1.8	279	82.5	61.1	28.1	23	14.3	5.74	2.8	2.14	1.64
<i>Standard Deviation</i>	<i>1.91</i>	<i>0.96</i>	<i>81.6</i>	<i>45</i>	<i>30.7</i>	<i>15.3</i>	<i>11.2</i>	<i>17.6</i>	<i>3.68</i>	<i>1.58</i>	<i>1.77</i>	<i>1.25</i>

Data on treatment integrity in Table 15 demonstrate that tuākana in the main consistently implemented the ‘Talk’, ‘Ask’, ‘Listen’, and ‘Encourage’ components of TALES. Five of the six tuākana also demonstrated their use of the ‘Say’ component.

2. Total Talk (Teina)

The total number of words spoken by the six tuakana and teina pairs in five minute probes taken in Week 1 and Week 6 was counted and compared. Words that were unclear were not included in the total.

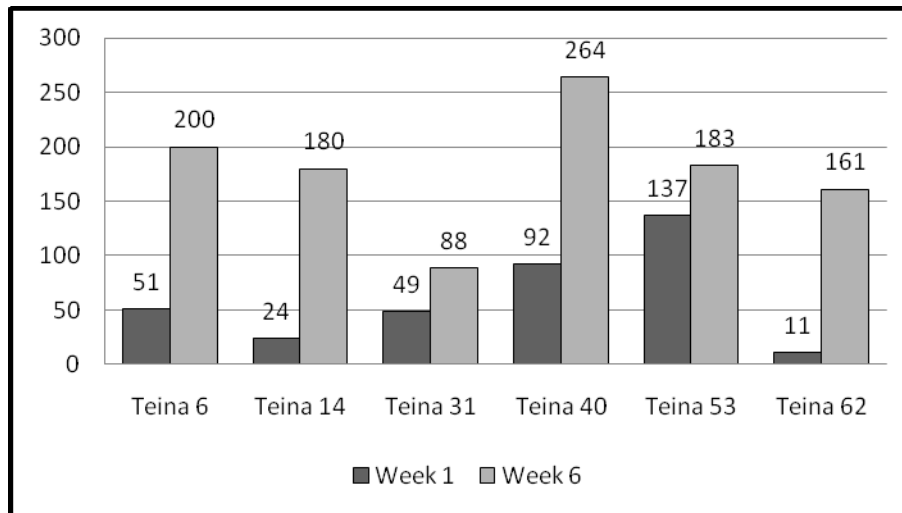


Figure 5: Total teina talk: Pre – post changes

Figure 5 shows that the total words spoken increased dramatically for all six teina between Week 1 and Week 6. Table 16 shows that for five of the six teina a dramatic increase in total words spoken also occurred between Week 1 and Week 2.

Table 16
Weekly total talk of six teina from four schools

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
School A 2005 Teina 6	51	241	180	218	247	200
School B 2005 Teina 14	21	184	116	176	103	180
School A 2006 Teina 31	49	76	138	130	48	88
School B 2006 Teina 40	92	163	165	314	274	264
School C 2006 Teina 53	137	198	110	211	297	183
School D 2006 Teina 62	11	154	138	121	95	161
Mean	60.16	169.33	141.16	195	177.33	179.33
<i>Std Dev.</i>	<i>47.06</i>	<i>55.06</i>	<i>27.20</i>	<i>70.72</i>	<i>107.28</i>	<i>57.07</i>

Figure 6 shows that the mean total of words spoken by the six teina more than doubled from Week 1 to Week 2. This substantial increase in talk was maintained throughout the entire six week intervention period.

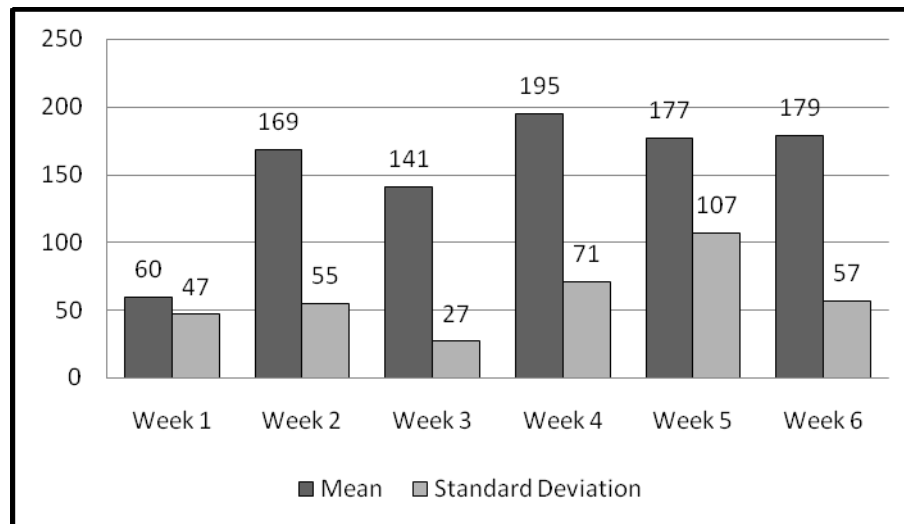


Figure 6: Weekly mean total talk of six teina from five minute probes

The very substantial increases in teina total talk are highly likely to have resulted from the increase in the quantity of conversational language that the teina were engaged in over the six weeks, even though the number of TALES sessions attended, according to the tuākana, was much lower than anticipated.

3. Total Talk (Tuākana)

Figure 7 and Table 17 indicate that three tuākana *decreased* their total talk between Week 1 and Week 6, while the remaining three *increased* their total talk between Week 1 and Week 6. The three tuākana who decreased their total talk were the three who had the highest level of total talk in Week 1, while the three who increased their total talk were the three who had the lowest level of total talk in Week 1. In Week 1 the mean total talk of the six tuākana was 304.33, with a standard deviation of 177.61. In Week 6 the mean total talk of the six tuākana was 299, with a standard deviation of 75.86.

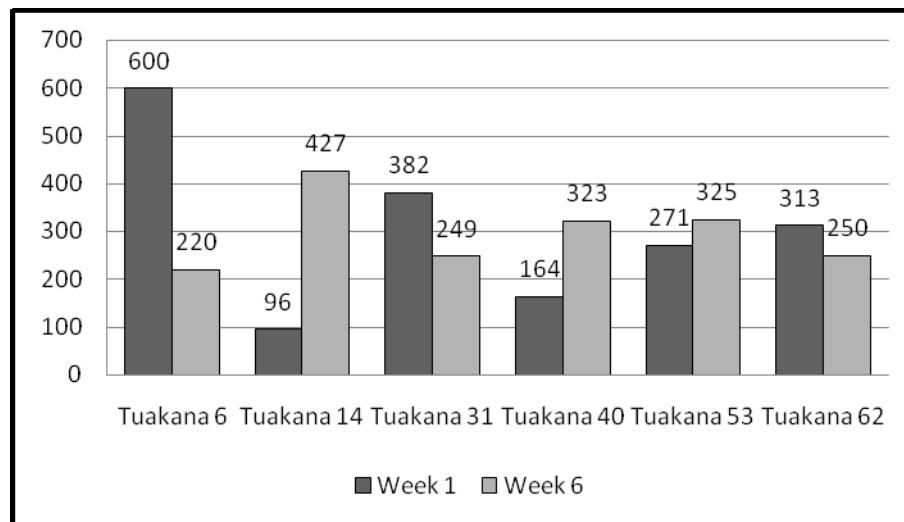


Figure 7: Total tuakana talk: Pre – post changes

The mean total talk of the six tuākana has not changed significantly between Week 1 and Week 6, however there has been a significant decrease in the standard deviation. This is largely influenced by the dramatic changes in the number of words spoken by Tuakana 6 and Tuakana 14 between Week 1 and Week 6 (See Table 17):

Table 17

Weekly total talk of six tuākana from four schools

TOTAL TALK	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
School A 2005 Tuakana 6	600	475	442	421	373	220
School B 2005 Tuakana 14	96	210	133	372	252	427
School A 2006 Tuakana 31	382	262	101	320	261	249
School B 2006 Tuakana 40	164	119	69	208	146	323
School C 2006 Tuakana 53	271	308	301	282	270	325
School D 2006 Tuakana 62	313	325	285	248	242	250
Mean	304.33	283.16	221.83	308.5	257.33	299
<i>Std Dev</i>	<i>177.61</i>	<i>119.93</i>	<i>144.62</i>	<i>79.09</i>	<i>72.40</i>	<i>75.86</i>

The quantitative treatment integrity data presented in this section show that the tuākana experienced little difficulty in implementing the TALES procedures within the tuakana-teina interactive contexts established in this research study.

Qualitative results

The qualitative analysis of the transcribed tapes provided valuable information about the learning intentions of the tuakana delivered TALEs programme, and the usefulness of the five minute probes and feedback and feed-forward sessions for formative assessment purposes.

Examples of treatment fidelity and integrity of tuākana implementing TALEs, including the ‘number one goal’ of TALEs, to get the teina to ‘talk more,’ and, the ‘number one rule’ of TALEs to ‘have fun’ when using the TALEs components are highlighted.

Audio tapes of key teacher and tuakana feedback and feed-forward sessions

More than half (35) of the potential (60) feedback and feed-forward conversation sessions between the key teachers, and/or key teacher researcher, and tuākana were tape recorded. Examples relevant to learning intentions, tuakana reflection, and TALEs treatment integrity have been transcribed and included within the text where appropriate.

Tuakana checklist and summary sheets

The six tuākana selected by stratified random sampling, completed 35 out of a potential 36 tuakana checklist and summary sheets. Again examples relevant to learning intentions, tuakana reflection, and TALEs treatment integrity have been included in the text where appropriate.

Anecdotal observations

Pertinent comments and anecdotal observation notes from key teachers, the researcher as key teacher, and parents/caregivers have been included where appropriate.

The six tuakana – teina pairs

The analysis of each tuakana and teina pair's set of transcripts, tuakana checklist and summary sheets, and the transcripts of key teacher and tuakana conversations, was considered separately. All the information gathered about each pair, including relevant anecdotal information, was included within the analysis to provide an overall 'story' for each pair. Each analysis includes a combination of quantitative and qualitative findings:

Pair Number 1: Tuakana 6 and Teina 6

According to the information provided by Tuakana 6 on the tuakana checklist and summary sheets Tuakana 6 and Teina 6 attended 21 of a potential 24 TALES sessions.

Pre treatment anecdotal observation of Tuakana 6

Tuakana 6 is a Year 6 girl who considers herself to be Māori. Prior to involvement in the research study and TALES programme she tended to dominate in classroom group discussions and was sometimes loudly argumentative. The key teachers selected Tuakana 6 with the goal/learning intention that her involvement in the TALES programme might help her to develop turn taking and better active listening skills.

In Week 1 Tuakana 6 and Teina 6 were in the junior classroom. Play dough and a shopping set were the conversational props provided for extra linguistic support. Tuakana 6 demonstrates some understanding of her role as an active participant in the research study when she explains that Teina 6 mustn't touch the tape recorder buttons. She also demonstrates that she has some understanding of the importance of having fun:

- 081 Tuakana 6 *You're not supposed to touch that button. Cause then it'll turn off and then I can't hear you. I'm supposed to hear you.*
- 083 *Oh remember, oh yeah, we're playing with the play dough now aye.*
- 084 *Can you put up that?*
- 085 *And at the end of the session I'll give you a sticker.*
- 086 *You can tell your, your mum that um, your partner at TALES and you had lots of fun!*

- 089 *Cause that's the most important thing in TALES is fun. You have to have fun! If you don't have fun, well that there's bad!*
- 091 *Can you give me some play dough? Oh. I've already got some play dough.*
- 092 Teina 6 *(Little laugh)*

Tuakana 6 showed that she could reflect on her practice in relation to the overall learning intention of developing active listening skills (See Figure 8). Figure 8 also provides an example of how the five minute probe was a useful tool for informing the content of the tuākana and key teachers' feedback and feed-forward:

Week: **3**

Tuakana Checklist

Tuakana: **[Tuakana 6]** Teina: **[Teina 6]** Date: **22/9/05**

I REMEMBERED TO:	Tues	Wed	Thurs	Frid
Set up the tape before my teina comes	✓	✓	✓	✓
T alk a lot to the teina about what we were doing	✓	✓	✓	✓
A sk the teina what they wanted to play	✓	✓	✓	✓
L isten actively to my teina by <ul style="list-style-type: none"> • Making listening sounds e.g., mmm • My body language e.g., nodding, facing teina 	✓	•	✓	•
E ncourage my teina by smiling, being friendly, and praising them	✓	✓	✓	✓
S ay: <ul style="list-style-type: none"> Hello Goodbye Their name lots 	✓	✓	✓	✓
Give my teina a sticker	✓	✓	✓	✓
Fast-forward the tape to the end	✓	✓	✓	✓
Pack up gear	✓	✓	✓	✓
Date and name the tape	✓	✓	✓	✓

This week I am learning to:
let my Teina choose what she wants to play with and that's about it

I will know I have learned this when:
Please, Thank you's and Good Bye's for after the sessions.

Any other comments:
[Tuakana 6], you chose two lots of 'learning to do's. I heard you do both on the tape. Great! Remember to keep listening to [Teina 6] if she changes her mind, and, let her lead the conversation too. Good girl.

Figure 8: Tuakana 6 checklist and summary sheet for Week 3

A sense of power sharing is demonstrated with the social courtesies of turn taking, and listening within a conversation, becoming more evident in Week 3. Tuakana 6 encourages Teina 6 to talk more through praising her skills at math:

- 079 Tuakana 6 *How much did that there cost?*
- 081 Teina 6 *(beeping noises from till)*
- 082 *Forty five*
- 082 Tuakana 6 *Yeah. And you push the plus.*
- 082 Teina 6 *Plus*
- 082 Tuakana 6 *Yeah. And now scan another one. Good girl! You're very clever aren't you [Teina 6].*
- 084 Teina 6 *Plus*
- 084 Tuakana 6 *Did you know when you do that?*
- 085 Teina 6 *Plus eighteen*
- 086 *Sixteen*
- 087 Tuakana 6 *Yeah. Plus*
- 087 Teina 6 *Plus*
- 087 Tuakana 6 *You're very good at maths [Teina 6].*
- 088 *This is*
- 088 Teina 6 *Plus*
- 088 Tuakana 6 *All about maths.*
- 088 *Did you know that [Teina 6]?*

In Week 4 Tuakana 6 and Teina 6 provided a nice example of the principles of *ako* through which Tuakana 6 learns from Teina 6, indicating that the beginning of a two-way (reciprocal) learning relationship was formed:

- 060 Tuakana 6 *First we, we, we we're making heaps*
- 060 Teina 6 *Some, wait there, wait there, wait I just need that over there. Put the play dough on*
- 062 Tuakana 6 *Oh!*
- 063 *That's a better way!*
- 063 Teina 6 *Put your fish on it.*
- 064 Tuakana 6 *Yep.*
- 064 Teina 6 *Yes.*

- 065 Tuakana 6 *Then what does that do?*
- 066 Teina 6 *That dos like this.*
- 067 Tuakana 6 *Oah. That's even a better way isn't it [Teina 6].*
- 068 Teina 6 *yeah*
- 068 Tuakana 6 *It's a real better way.*

In Week 5 the conversation has become even more balanced. Tuakana 6 provides an example of self monitoring regarding some of the requirements of implementing TALES, and, Teina 6 also demonstrates some understanding of the process:

- 000 Tuakana 6 *What do you want to play with today?*
- 001 Teina 6 *Play dough.*
- 001 Tuakana 6 *Okay.*
- 001 Teina 6 *Make, I'm making a snow man and you're making*
- 002 Tuakana 6 *Oah guess what thing I forgot to say?*
- 003 Teina 6 *What?*
- 003 Tuakana 6 *Hello!*
- 003 Teina 6 *Yeah (little laugh).*
- 004 Tuakana 6 *So 'Hello'.*
- 005 Teina 6 *So we can not forgotten the thing aye?*
- 005 Tuakana 6 *And, yeah*
- 006 Teina 6 *Cause, and goodbye, say goodbye*
- 006 Tuakana 6 *Yeah. I'll say goodbye after okay?*
- 007 Teina 6 *Yeah.*

Tuakana 6 tended to dominate the conversations for the first four weeks of involvement in the TALES programme. This was consistent with the pre-treatment anecdotal observation. However, power sharing became evident by Week 5. Krashen (1987) identified that “when input is comprehensible, when meaning is successfully negotiated, $i + 1$ will be present automatically, in most

cases” (p. 68). The following conversation between Tuakana 6 and Teina 6 demonstrates how the building on of language can occur in a balanced conversation., ‘a nose’ becomes ‘a pointy nose’, and ‘eyes’ become ‘tiny eyes’:

- 050 Teina 6 *Need a nose*
- 050 Tuakana 6 *There’s a nose (spoke at the same time)*
- 051 *That can look like a nose.*
- 053 Teina 6 *Mine’s took. Come on babe.*
- 054 *Look at mines.*
- 054 Tuakana 6 *There’s my nose.*
- 055 *Got a pointy nose.*
- 055 Teina 6 *Mines aint.*
- 056 *Mm.*
- 057 Tuakana 6 *See (unclear) pointy nose.*
- 057 Teina 6 *How come you made a pointy nose? (Spoke at same time as Tuakana 6)*
- 058 *Can make a pointy nose for me?*
- 058 Tuakana 6 *Okay then.*
- 059 Teina 6 *Now just do it now.*
- 060 Tuakana 6 *Need the pointy nose.*
- 062 *So. Go like that.*
- 063 *See [Teina 6]. You just go like this. Okay?*
- 064 *And bring it in.*
- 065 *Where’s your eyes?*
- 065 Teina 6 *There.*
- 066 Tuakana 6 *You need to turn it around like that, cause you need your nose.*
- 068 Teina 6 *And my eyes.*
- 069 Tuakana 6 *You need tiny eyes.*
- 070 *Here you are.*
- 071 *Tiny eyes.*
- 072 *And that’s your snow...*

- 073 Teina 6 *No! And the hair.*
- 073 Tuakana 6 *Hang on. I need to do my eyes.*
- 075 *Two*
- 075 Teina 6 *I'm making a girl.*
- 076 *You need to make a girl, but*
- 076 Tuakana 6 *I'm doing a baby one.*
- 077 Teina 6 *A baby girl? Oah look at my hair!*
- 077 Tuakana 6 *Cool.*
- 078 Teina 6 *Why I need it*
- 079 Tuakana 6 *That's really cool [Teina 6].*
- 079 Teina 6 *Cause my hair.*

The transcript above also provides an example of Tuakana 6, in a natural manner, using all of the TALEs components. Tuakana 6's use of the TALEs components is reflected in the overall analysis of the six five minute probes (See Table 18).

Table 18:

Tuakana 6 and Teina 6 TALEs component treatment integrity and number of words spoken in six five minute probes

School A 2005: Group 2 Pair 1	Total talk (others)	Teina 6			Tuakana 6					
		(Unclear)	Talk	Ask	(Unclear)	Talk	Ask	Listen	Encourage	Say
WEEK 1	0	1	51	8	1	600	160	13	11	4
WEEK 2	0	3	241	41	1	475	125	15	16	8
WEEK 3	0	3	180	26	2	442	117	21	11	5
WEEK 4	0	2	218	35	0	421	127	32	13	6
WEEK 5	0	1	247	56	1	373	56	28	7	3
WEEK 6	0	1	200	50	4	220	24	17	7	0
Mean	0	1.83	189.5	36	1.5	421.8	102	42.98	10.83	4.33
<i>Standard Deviation</i>	<i>0</i>	<i>0.98</i>	<i>72.32</i>	<i>17.36</i>	<i>1.37</i>	<i>125</i>	<i>50.9</i>	<i>50.34</i>	<i>3.48</i>	<i>2.73</i>

Bishop and Glynn (1999) suggest that “The promotion of a position where learners can question must surely be our ultimate goal, particularly if they can raise questions from a position of being safe in that their cultural integrity is unquestioned and they themselves are accepted.” Table 17 shows that in Week 1 Teina 6 used eight words posed as questions and in Week 6 she used fifty words posed as questions. Teina 6 more than doubled the number of questions asked between Week 1 and Week 2, suggesting that within a relatively short period of time she felt safe to ask questions.

Tuakana 6 clearly dominated the conversation in Week 1 (See Figure 9). The total number of ‘Talk’ words spoken by the tuakana between Week 1 and Week 6 gradually declined until the number of talk and ask words spoken by Tuakana 6 and Teina 6 was similar, indicating a more balanced conversation within which neither dominates. This balance suggests that the learning intention for Tuakana 6 to develop turn taking and better active listening skills was achieved.

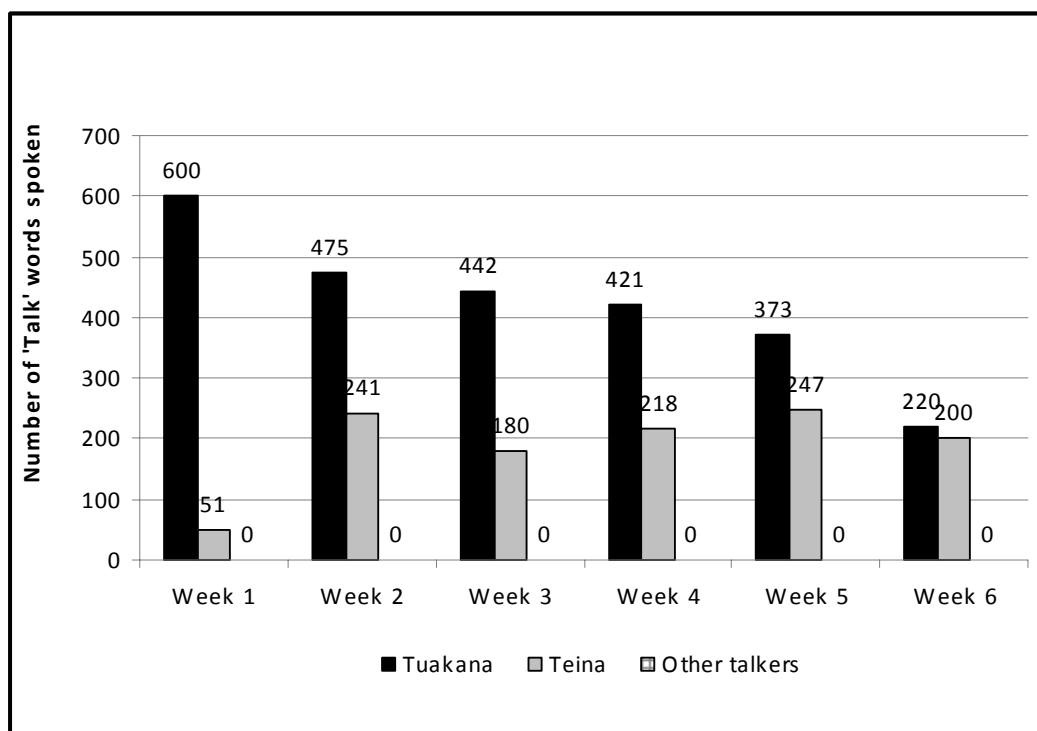


Figure 9: Tuakana 6 and Teina 6 total talk words spoken during six five minute probes.

Figure 9 also demonstrates that there was a significant increase in the total number of ‘Talk’ words spoken by the teina between Week 1 and Week 2. This increase was sustained throughout the six week intervention. No words from ‘other talkers’

were recorded in the five minute probes. Table 19 demonstrates the gains made by Teina 6 on the three measures used in the research study.

Table 19

Oral language outcome data for Teina 6

ASSESSMENT MEASURE	TIME 1	TIME 2	TIME 3	TIME 4
Record of Oral Language Results (ROL) (42)	7	7	11	12
Auditory - Vocal Association (AVA) (26)	12	16	18	18
Junior Oral Screening Tool (J.O.S.T) (58)	33	38	48	49

The shaded areas signify when treatment was introduced.

Pair Number 2: Tuakana 14 and Teina 14

According to the information provided by Tuakana 14 on the tuakana checklist and summary sheets Tuakana 14 and Teina 14 attended 17 of a potential 24 TALEs sessions.

Pre treatment anecdotal observation of Tuakana 14:

Tuakana 14 is a female Year 6 student and considers herself to be Māori. She was included in the school special needs register. She was reported by teachers as being uncommunicative with adults and peers and did not contribute to class or group discussions. Tuakana 14 struggled academically across all curriculum areas. Her teacher was concerned that Tuakana 14 was so very shy, quiet, and lacking in confidence, that she might not be able to fulfill the tuakana role. The teacher reported that Tuakana 14 rarely spoke in class, and usually grunted in response to roll call in the mornings. The suitability of Tuakana 14 for selection as tuakana was discussed at length. It was agreed that Tuakana 14 needed to be monitored carefully, and that the teina selected to work with her would need to be confident and friendly. The key teachers selected Tuakana 14 with the learning intention that involvement in the TALEs programme might improve her communication skills, and increase her confidence by providing opportunities for her to experience success.

Although the pace of talk was slower than most of the other pairs in Week 1, Tuakana 14 demonstrates a clear potential for providing the ‘Talk’ component of TALES:

- 059 Tuakana 14 *Oh yeah. (Unclear)*
- 064 (Whisper) *[Teina 14] come over here.*
- 067 *Yep. Some play dough.*
- 074 *Here, I’ll make anything you want.*
- 075 (Whisper) *[Teina 14] move back.*
- 077 (Whisper) *you can play with anything.*
- 084 *Here you could play with these.*
- 086 *That’s recording you.*
- 087 *So. What are you going to play?*

In Week 2 Tuakana 14 refers directly to her learning intention for the week ‘To talk, talk, talk.’ Tuakana 14 and Teina 14 also provide a good example of the principles of *ako* when Teina 14, demonstrating his understanding of the programme requirements, prompts Tuakana 14 with what she needs to do regarding TALES:

- 011 Tuakana 14 *‘Talk, talk, talk’ okay.*
- 011 Teina 14 *No. Aren’t you going to say ‘good morning [Teina 14]?’*
- 012 Tuakana 14 *Hey?*
- 013 Teina 14 *Said ‘Good morning [Teina 14]’?*
- 013 Tuakana 14 *Good morning [Teina 14]*
- 014 Teina 14 *You forgot!*
- 015 Tuakana 14 *Hello [Teina 14].*
- 015 Teina 14 *In the tape recorder! In the tape recorder!*
- 017 Tuakana 14 *Hello [Teina 14]*

Tuakana 14 demonstrates in Week 2 that she has listened carefully during TALES tuakana training and feedback and feed-forward sessions when she recognizes

with excitement the importance attached to Teina 14 asking questions. She shares her excitement with the researcher:

- 061 Teina 14 *What you making [Tuakana 14]?*
- 062 Tuakana 14 *Pizza. I'm making a big large pizza.*
- 064 *Oh. [Researcher's name] [Researcher's name]. He just asked me what I'm making!*
- 065 Researcher *Very good. And did you tell him what you were making?*
- 066 Tuakana 14 *Yep.*
- 067 Researcher *What are you making?*
- 067 Tuakana 14 *A pizza!*
& Teina 14

In Week 2 Key Teacher 4 reported with great surprise that Tuakana 14 was responding confidently to roll call with “Good morning Key Teacher 4. Hope you have a nice day.” Key Teacher 4 reported that this was a major shift as Tuakana 14 nearly always responded with a grunt in the past. Key Teacher 3 felt that because the pairs were working in class, and everyone else was busy doing other work, Tuakana 14 was able to relax and communicate more confidently with Teina 14. Observations of three sessions in Week 2, taken by the researcher, also showed an exciting shift in confidence for Tuakana 14. Tuakana 14 was observed talking confidently and happily with Teina 14, both stating how much fun they were having. Tuakana 14 also demonstrated leadership skills in Week 2 by reminding the other tuākana of requirements around audio taping and what their learning intention for the week was.

There was quite a noticeable shift in the language used by Tuakana 14 by Week 4. Tuakana 14 talked with confidence throughout the Week 4 probe providing the key teacher with information about some of the knowledge Tuakana 14 had about dinosaurs.

Teina 14's questions provide an example of the principles of *ako*. The interest Teina 14 had in whether Tuakana 14 had ‘worried’ about him suggests the importance that a culture of caring might have for Teina 14:

000 Tuakana 14 *Hello [Teina 14].*

001 Teina 14 *Hello.*

001 Tuakana 14 *What do you want to play? You're playing with the play dough today. And I'm playing with the dinosaurs.*

002 Teina 14 *Who's this?*

003 *What's this do?*

004 *Oh. I know. I know. It's some plate.*

004 Tuakana 14 *I don't know what that is.*

005 Teina 14 *Yes. You stick it in here 'cos [Teina 16] did. He stucked it in here.*

007 Tuakana 14 *Yeap. I think so (unclear).*

008 Teina 14 *Were you worried about me? Were you waiting for me?*

010 Tuakana 14 *Yes. Nnn.*

Look. Oh no, that doesn't go there.

Call a herd. Like a dinosaur. Where's this one going to go?

014 Teina 14 *I don't*

014 Tuakana 14 *Put it over there*

016 *Make a jungle.*

017 *Dinosaurs. Predator. Oh. Look at this big dinosaur. They're all getting together these dinosaurs.*

021 *There's one dinosaur, and there's these bushes, and...*

025 *...and there's a little baby dinosaur going to its mummy dinosaur.*

025 Teina 14 *Mm.*

026 Tuakana 14 *Over here, there's its mummy dinosaur.*

029 *Here's a cactus. There.*

Tuakana 14 made a huge shift over the six week duration of the TALES programme. From a shy, quiet girl in Week 1, Tuakana 14 demonstrated in Week 6 a growth of confidence and sense of fun, even taking on other roles when playing with the cash register:

050 Tuakana 14 *Oh. Cash register.*

051 *'De' 'De' 'De' 'De'.*

- 052 *Reporting for duty. This is [Tuakana 14] speaking.*
- 054 *We have two chocolates down aisle three.*

Tuakana 14 was able to clarify information by repeating, rephrasing and extending information. The matrix of interpersonal speaking skills provided by the Ministry of Education (2008g) considers the ability to express and justify some ideas and opinions as a progress indicator at Level 2. Tuakana 14 expressed the opinion that the teina had enough items already, and justified that opinion by stating that she didn't think she could do that many, and that she didn't think he'd be able to fit them all in, and that he wouldn't be able to eat that many things!

- 064 Tuakana 14 *There 'De' 'De' 'De' 'De'. Okay that is...*
- 068 *That's all. That's all 'cos I'm (unclear) with.*
- 069 *Yeah. That's all [Teina 14].*
- 069 Teina 14 *Nah.*
- 070 Tuakana 14 *But I can't do all that many. I can't do that many. Okay. I'll try and do all of it.*
- 073 *I like that noise of this. See. Listen (K-ching noise).*
- 075 *I don't think you can fit all of it in there.*
- 075 Teina 14 *Yes.*
- 076 Tuakana 14 *You can't eat that many things!*

The language used demonstrated that both Tuakana 14 and Teina 14 had some familiarity with shopping and found it an interesting and relevant activity. The key teacher feedback, recorded at the bottom of the tuakana checklist and summary sheet in Week 6, sums up how well she has done as a tuakana: 'Excellent work again this week [Tuakana 14]. Your questions and instructions were clear. [Teina 14] feels very comfortable with you. He talks lots and lots, as well as asks lots of questions. Awe-some!'

The transcripts above also provided examples of Tuakana 14 confidently using all of the TALES components in a natural manner. This use of the TALES components is reflected in the overall analysis of the six five-minute probes (See Table 20, row 2).

Table 20

Tuakana 14 and Teina 14 TALES component treatment integrity and number of words spoken in six five minute probes

School B 2005: Group 1 Pair 2	Total talk (others)	Teina 14			Tuakana 14					
		(Unclear)	Talk	Ask	(Unclear)	Talk	Ask	Listen	Encourage	Say
WEEK 1	93	2	21	8	1	96	30	4	5	2
WEEK 2	37	8	184	85	0	210	25	14	2	5
WEEK 3	147	0	116	52	0	133	31	10	5	2
WEEK 4	0	6	176	36	4	372	38	13	7	5
WEEK 5	68	5	103	22	2	252	23	18	3	5
WEEK 6	5	7	180	15	1	427	11	20	2	3
Mean	58.33	4.66	130	36.33	1.33	248	26.3	13	4	3.67
<i>Standard Deviation</i>	<i>56.32</i>	<i>3.07</i>	<i>63.78</i>	<i>28.56</i>	<i>1.50</i>	<i>131</i>	<i>9.16</i>	<i>5.7</i>	<i>2</i>	<i>1.51</i>

Figure 10 shows Tuakana and Teina 14 total ‘Talk’ words, spoken across the five minute probes. Figure 10 demonstrates that Tuakana 14 was contributing much more to the conversations by Week 6. The number of words spoken by ‘other talkers’ has been included in Figure 10 and this is likely to have influenced the number of words spoken by Teina 14 and Tuakana 14. The ‘other talker’ in Week 1 was the researcher who provided ‘lots of support’, as agreed was needed by the collaborative key teaching team. The researcher provided several prompts and reminders of what to do. There was a substantial increase in talk from both Tuakana 14 and Teina 14 by Week 2, with both students more than doubling the number of words spoken between Week 1 and Week 2. The number of words spoken by both students dropped a little in Week 3. It is likely that this was again influenced by the increased number of words spoken by ‘other talkers’. However, by Week 4 Tuakana 14 had increased more than three times the number of words spoken in Week 1.

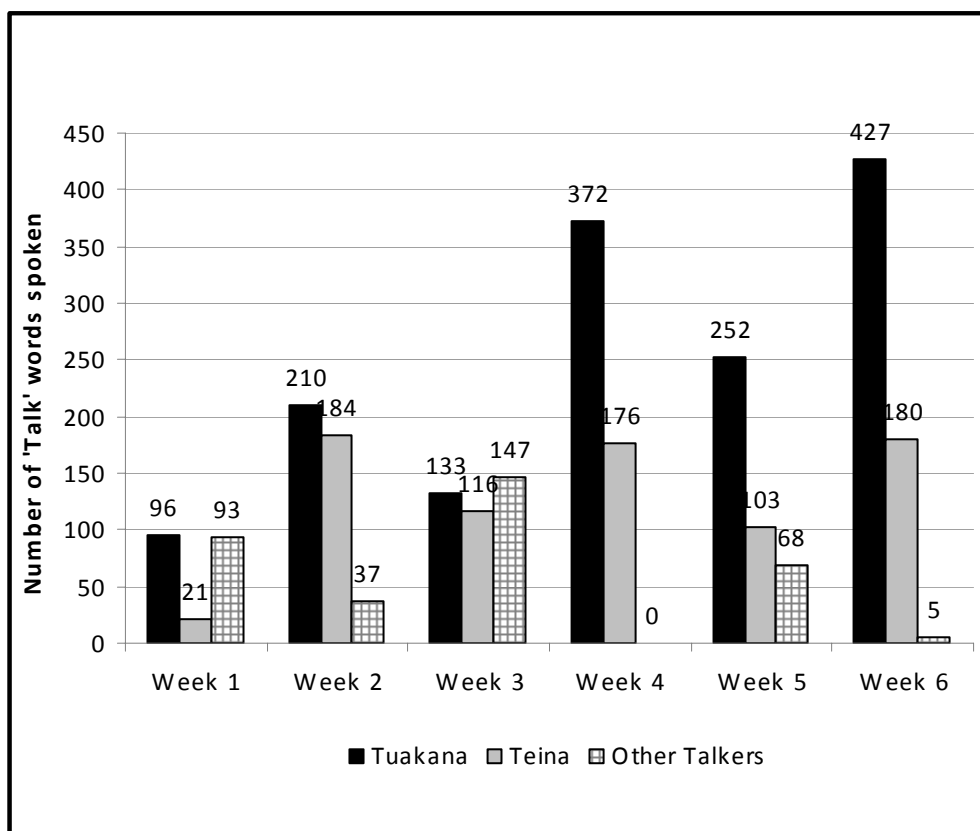


Figure 10: Tuakana 14 and Teina 14 total talk words spoken during six five minute probes.

Analysis of the five minute probes showed that the learning intentions, that involvement in the TALEs programme would improve the communication skills of Tuakana 14, and increase her confidence, as well as provide language opportunities for her to experience success, have clearly been met.

Table 21 demonstrates the gains made by Teina 14 on the three outcome measures of oral language used in the research study:

Table 21

Oral language outcome data for Teina 14

ASSESSMENT MEASURE	TIME 1	TIME 2	TIME 3	TIME 4
Record of Oral Language Results (ROL) (42)	10	16	15	12
Auditory - Vocal Association (AVA) (26)	11	13	13	16
Junior Oral Screening Tool (J.O.S.T) (58)	31	36	37	41

The shaded areas signify when treatment was received.

Pair Number 3: Tuakana 31 and Teina 31

According to the information provided by Tuakana 31 on the tuakana checklist and summary sheets, Tuakana 31 and Teina 31 attended 21 of a potential 24 TALES sessions.

Pre treatment anecdotal observation of Tuakana 31:

Tuakana 31 is a Year 6 boy who considers himself to be Māori. He is reported as being often in trouble at school and has a history of being suspended. The key teacher selected Tuakana 31 with the learning intention that involvement in the TALES programme and research study might provide opportunities for him to behave appropriately, successfully follow instructions, and positively build his sense of responsibility.

In Week 1 Tuakana 31 demonstrated that he was able to initiate and maintain a conversation, generally keeping to the topic. He also demonstrated that he was able to fulfill some of the responsibilities of a tuakana, as he remembered what he needed to say into the tape recorder. Teina 31 demonstrated that she was able to ask questions to gain information:

- 000 Tuakana 31 *What are we going to do now?*
- 001 Teina 31 *What is this?*
- 001 Tuakana 31 *Play dough.*
- 002 Teina 31 *Play dough?*
- 002 Tuakana 31 *Yeah.*
- We'll cook the play dough aye?*
- 002 Teina 31 *Huh?*
- 003 Tuakana 31 *We'll put the play dough in here.*
- 003 Teina 31 *Yeah.*
- 003 Tuakana 31 *Want to? Put your play dough in. Come over. Come here beside me (Unclear).*
- 005 *Let's put it in the oven.*
- 005 *Put it in the oven.*
- 006 *Oh. Um. Hi [Key Teacher 2]. It's me [Tuakana 31]. It's the 16th today. And I'm here with Teina 31.*

008 *Say 'Hi' [Teina 31].*

008 Teina 31 *Nah.*

009 Tuakana 31 *Say 'Hi'! Oh. 'Hi'.*

010 *Yeah. And that's it.*

011 *What are we going to eat today?*

013 *What are we going to have for lunch?*

Um, a tomato, um chicken. Some, something, and...

In Week 1 Tuakana 31 and Teina 31 provided an example of power sharing when Tuakana 31 asked what Teina 31 thought he should do. Tuakana 31 was able to respond appropriately to questions and displays some social courtesies in the conversation, such as turn taking and listening to the speaker. He also checked with Teina 31 to make sure she agreed with his proposed action. Teina 31 showed that she was already becoming accustomed to the TALES routine when she commented about getting a sticker when the bell rang:

089 Tuakana 31 *You want some chicken with me?*

089 Teina 31 *No thanks.*

090 *I need to make this.*

091 *Put this on.*

092 *You're going to give me a sticker when the bell rings aye?*

093 Tuakana 31 *Yeah, I'll give you two stickers.*

094 Teina 31 *Aye?*

094 Tuakana 31 *You want one sticker, or two stickers?*

095 Teina 31 *Um, only two!*

095 Tuakana 31 *Oh. Should I go and ask for the other people for one, for one more of these, aye? Then we could make a, um, we could make a snow man.*

095 Teina 31 *Yeah.*

097 Tuakana 31 *Come on then. I'll just go ask them, okay?*

099 *Come on. We'll make a snow man now.*

Sections of the first feedback and feed-forward session that included conversations between the researcher as key teacher, and the group of tuākana in the school, were transcribed to provide some insight into Tuakana 31's attitude to being involved in TALES. Tuakana 32 (in Group 2), talked about the selection of conversation props, and provided a positive example about Teina 32's behaviour and talking. The researcher asked other tuākana in the group what their experience was:

- 066 Researcher *How about your guys?*
- 067 Tuakana 31 *She's brilliant*
- 068 Researcher *Oh she's, [Teina 31], she's brilliant?*
- Cool.*

Tuakana 31 demonstrated that he remembered the number one rule of TALES. The importance that the teina placed on being with the tuākana, and the potential for conversations outside of the TALES sessions, was evident at the end of Week 1:

- 278 Researcher *Did you guys have the most important thing this week?*
- 278 Tuakana 31 *I had fun!*
- 279 Researcher *Yes! I'm glad to hear that you had fun!*
- 279 Tuakana 30 *I had better than fun.*
- 280 Researcher *Cool! Did your teina have fun as well?*
- 280 Tuakana 33 *Yes. She doesn't want to go.*
- 280 Researcher *Doesn't want to go back to class?*
- 281 Tuakana 31. *Yeah! She wants to play all day!*
- 281 Researcher *With you?*
- 281 Tuakana 31 *Yeah.*
- 281 Researcher *Do they talk to you at other times during the day?*
- 281 Tuakana 30 *Nah*
- 282 Tuakana 31 *Yeah, she's goes, 'you're the one who, you're the one who takes me for um TALES!'*
- 283 Researcher *Yeah. Cool. And remember you talk about what you are doing with her. Try and keep her with you.*

- 284 Tuakana 31 *Yeah. And she goes 'Oh you. You're my, you're [Tuakana 31] aye.'*
- 285 Researcher *[Tuakana 31], oh that's good. That's good. So that's like at lunch time and play time?*
- 286 Tuakana 31 *Yeah.*
- 286 Researcher *Cool.*
- 286 Tuakana 31 *And when um, and when she's going somewhere. I will go outside and she goes 'Hi [Tuakana 31].'* Yeah.

The potential for the tuākana to support and learn from each other in the feedback and feed-forward sessions was also evident. The shared goal of getting the teina to talk more was reinforced, and Tuakana 31 looked for feedback. Tuakana 31 showed the potential to be a leader, and demonstrated that he wanted to do the job properly:

- 293 Tuakana 31 *I keep on going oh, are you um, do you go, do you say your name miss?*
- 294 Researcher *On the tape. I need it on the tape.(To other tuakana)*
- 295 Tuakana 31 *Oh miss, do you go like 'Hi [Key Teacher 2]. It's me [Tuakana 31]!*
- 296 Researcher *Yes you do. You do need to do that and you need to say the day and the name again.*
- 297 Tuakana 31 *Yeah. They don't do that. Oh, do you fellas do that?*
- 297 Tuakana 33 *I do.*
- 298 Researcher *Yeah good. You need to do that every day.*
- 298 Tuakana 33 *I put the sheet up.*
- 299 Researcher *Not too close because I won't be able to hear. [Muffled yeah.]*
- 300 Tuakana 31 *Yeah I go like this*
'Hi [Key Teacher 2]. It's me! [Tuakana 31]. It's the' I forgot the date.
- 301 Tuakana 29 *18th today*
- 301 Tuakana 31 *18th today and*
- 301 Researcher *Put the date. Put it on the tape (To other tuakana)*
- 302 Tuakana 31 *I am playing with [Teina 31]. And then I say [Teina 31] say something, and she says 'Hi [Key Teacher 2]. It's me [Teina 31].*

- 304 Researcher *I have to get the tapes off [Key Teacher 2] (To other tuakana).*
- 305 *Okay you guys. What is our number one goal?*
- 306 *[Tuakana 33]?*
- 306 Tuakana 33 *Um, to say your teina's name a lot.*
- 306 Researcher *Okay, that's your personal goal. Altogether our goal is to, within the next six weeks or five weeks left....,*
- 307 Tuakana 31 *To have fun.*
- 307 Researcher *You've got to have fun. That's our number one rule. You have to have fun*
- 308 Tuakana 29 *And get your teina work, oh talking.*
- 309 Researcher *To get your teina talking. To give over lots of words to them so that they'll be able to give words back to you. So talk, talk, talk, talk, talk, talk, about what you're doing. Okay? Ka pai.*

Although Tuakana 31 demonstrated that he was able to approach his role as tuakana responsibly in Week 1, the ongoing issues surrounding his behaviour were brought to the fore in the feedback and feed-forward session:

- 224 Researcher *Oh [Tuakana 31], I'm so sad that you were sick that day. I'll give you a new sheet aye.*
- 225 Tuakana 31 *I wasn't. I was suspended.*
- 225 Researcher *Oh [Tuakana 31]. I don't want, I'm sad to hear that too, my friend. Aye? Especially when you are such a responsible tuakana. Don't you go getting yourself suspended, because your teina is going to miss you, you've got a job to do. Aye?*

In Week 2 Tuakana 31 demonstrated that he was responsive to Teina 31 and endeavoured to impart words of wisdom:

- 069 Teina 31 *Can I be the shop now?*
- 070 *[Tuakana 31]?*
- 070 Tuakana 31 *Thank you. Come again.*
- 071 Teina 31 *Can I be the shop?*
- 071 Tuakana 31 *Yep. You can be the shop now.*
- 073 *You need all the money.*
- 074 *All the money. You have to spend it wisely.*
- 075 Teina 31 *Yep.*

The importance of the tuakana teina relationship to Teina 31 is highlighted to Tuakana 31 during the session in Week 4. The potential for his involvement in TALEs to develop his sense of responsibility and to modify his behaviour was demonstrated when he demonstrated that he was capable of contributing to the development of a culture of caring within the school:

- 043 Tuakana 30 *Hey [Teina 31], before, you tell her look for him.*
- 044 Tuakana 31 *Oh did you?*
- 045 *What did you want me for?*
- 045 Teina 31 *I don't know.*
- 046 Tuakana 30 *To play with you.*
- 047 Tuakana 31 *Oh, so you could play with me?*
- 047 Teina 31 *Yes.*
- 048 Tuakana 31 *Oh sorry. I wasn't at school.*
- 048 Tuakana 30 *Have to come earlier.*
- 049 Tuakana 31 *Hey (unclear)*
I'll come earlier next time aye?
- 049 Teina 31 *Okay.*
- 050 Tuakana 31 *Come earlier.*
- 050 Teina 31 *Were you late?*
- 051 Tuakana 31 *Yeah.*

It was also evident in Week 4 that problems might arise if a relief teacher has not been informed about the programme. Tuakana 31 and Teina 31 were playing with a multilevel garage with cars. The relief teacher had not been told about TALEs and requested Tuakana 31 and Teina 31 to be quiet:

- 065 Tuakana 31 *Help me get out of this thing. Yeah. Oah. Boom. Oh I can get us out. Oah. I can get us out (play noises). Man I tripped over.*
- 069 Teina 31 *I can get us out.*
- 069 Tuakana 31 *Look at this. Look.*

070 Teina 31 *Anyway out. Anyway out!*

071 Relief teacher *Okay you guys. Over here. Quiet.*

072 Tuakana 31 *Why can't we play?*

073 *We have to teach them.*

073 Relief teacher *Pardon?*

074 Tuakana 31 *We have to teach them.*

074 Relief teacher *Have to teach them what?*

074 Tuakana 31 *To learn!*

074 Relief teacher *How to be noisy?*

075 Tuakana 31 *Nah!*

075 Teina 31 *How to be quiet.*

075 Tuakana 31 *Nah.*

075 Relief teacher *You teach them how to be quiet?*

076 Tuakana 31 *No.*

077 *These are supports. That's why they call it TALES.*

078 Relief teacher *Alright.*

Tuakana 31 used talk to justify what they were doing, and what might have escalated into a confrontation was defused. It is probable that the relief teacher was justified in wanting the tuakana and teina to speak in quieter voices. However, she was clearly disadvantaged by being unfamiliar with what the programme was about.

A number of concerns were apparent in the five minute probe from a Week 5 TALES session. The tuakana and teina pairs were working in an empty class room without teacher supervision. Tuakana 31's talking demonstrated some of the behaviour difficulties he experienced, and the potential negative impact a tuakana might have on a teina if not in a classroom context with appropriate monitoring.

The following section of transcript provides important insight into the perception of three tuākana about identity, culture and language:

- 064 Tuakana 31 *Okay then.*
- 065 *You're fat.*
- 065 Tuakana 29 *So. You're ugly.*
- 065 Tuakana 31 *You're fat and Chinese!*
- 066 Tuakana 29 *No. I'm not Chinese! Can't speak. Do I know how to speak Chinese? No!*
- 067 Tuakana 31 *There's people that are Chinese and they can't speak Chinese.*
- 068 Tuakana 29 *At!*
- 068 Tuakana 31 *Oh yes. They were born in um*
- 069 Tuakana 29 *How can they be Chinese when they can't speak Chinese?*
- 070 Tuakana 32 *(Laughing) (unclear) [Tuakana 31].*
- 071 Tuakana 31 *I don't know.*
- 072 Tuakana 29 *Yeah. Well there you go!*
- 073 Teina 31 *There you go!*
- 073 Tuakana 31 *There's this boy, he's um, he's not from Chinese and he can speak Chinese.*
- 075 Tuakana 29 *Come on you stupid thing.*
- 075 Teina 31 *Yes. In room three. He's in room three.*

The impact that the ongoing argument between the two tuākana had on Teina 31 was disturbing. The importance of the programme being included within the classroom context where the teacher is able to monitor what is going on was highlighted:

- 084 Tuakana 29 *Shut up.*
- 084 Tuakana 31 *You're a fup.*
- 085 Teina 31 *Shut up you.*
- 085 Tuakana 29 *Shut up you guys I'm (unclear)*
- 086 Teina 31 *Shut up!*
- 086 Tuakana 29 *You shut up too.*

It is interesting to note from a methodological point of view that tape recording the conversations did not impact on the content of the conversation.

In Week 6, when the tuakana and teina pairs were back in the classroom context, where the teacher was able to provide supervision, it is clear that the language used was more appropriate. In this context Tuakana 31 again demonstrated that he was able to fulfill the responsibilities of a tuakana:

000 Tuakana 31 *[Teina 31].*
001 *Know what's (unclear)*
002 *[Teina 31], what are you playing with?*
002 Teina 31 *Play dough.*
003 Tuakana 31 *Wanna come and play with these with me?*
004 *Oh. I know what. We can play with the play dough and this.*
005 Teina 31 *(unclear)*
006 *Spuds*
007 Tuakana 31 *Can put our play dough on this as well?*
011 Teina 31 *Yeah. I going to make me some*
013 Tuakana 31 *Know what. Oh Hi [Researcher]. It's me and [Teina 31] here.*
016 *We don't know what we're doing, but we're going to do something anyway.*
017 *Ooo. Oh where's the (unclear)? Where's the (unclear)?*
020 *(Noises).*
021 *Look [Teina 31]. Look [Teina 31]!*
023 *[Teina 31] look! (Noises).*
025 *Ah look at the last one.*
(laugh)
025 Teina 31 *(Laugh)*

Tuakana 31 demonstrated throughout the six weeks that he was capable of implementing the TALES components successfully (See Table 22).

Table 22

Tuakana 31 and Teina 31 TALES component treatment integrity and number of words spoken in six five minute probes

School A 2006: Group 2 Pair 3	Total talk (others)	Teina 31			Tuakana 31					
		(Unclear)	Talk	Ask	(Unclear)	Talk	Ask	Listen	Encourage	Say
WEEK 1	0	4	49	29	2	382	111	13	7	3
WEEK 2	0	1	76	21	1	262	77	10	1	1
WEEK 3	14	7	138	25	10	101	22	11	5	0
WEEK 4	113	4	130	12	9	320	73	18	2	3
WEEK 5	204	4	48	1	5	261	27	13	3	1
WEEK 6	1	3	88	15	4	249	115	6	5	9
Mean	55.33	3.83	88.17	17.17	5.16	263	70.8	12	3.8	2.83
<i>Standard Deviation</i>	<i>0.70</i>	<i>1.94</i>	<i>38.8</i>	<i>10.09</i>	<i>3.65</i>	<i>93.7</i>	<i>39.8</i>	<i>4</i>	<i>2.2</i>	<i>3.25</i>

The sections of transcripts from the six five-minute probes demonstrated that involvement in the TALES programme and research study could provide opportunities for Tuakana 31 to behave appropriately, successfully follow instructions, and positively build his sense of responsibility. However it is also apparent that, as might be expected, Tuakana 31 required the appropriate context, where he was included in the classroom with supervision, to be able to maintain his positive behaviour and continue experiencing success in his role as tuakana in the TALES programme.

There appears to be no consistent pattern of increase in talk for Teina 31. The total of talk of both Tuakana 31 and Teina 31 varied (See Figure 11).

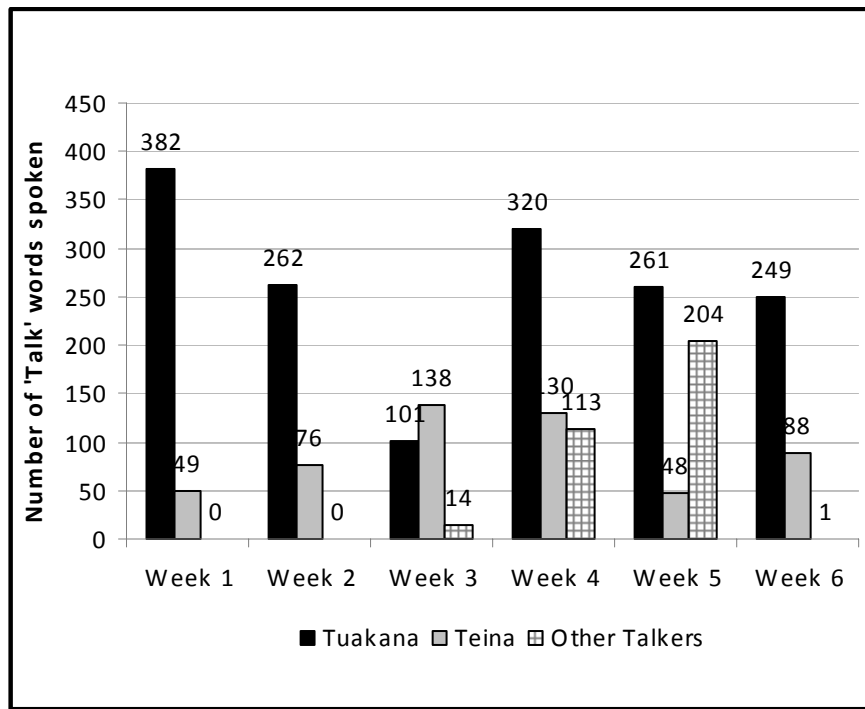


Figure 11: Tuakana 31 and Teina 31 total talk words spoken during six five minute probes

As might be expected, Teina 31’s total amount of talk dropped considerably in Week 5 when the session was in an unsupervised context. Overall, although there is not as substantial an increase in the quantity of total talk of Teina 31 compared with other teina, the positive impact of involvement in the TALES intervention is demonstrated in Teina 31’s gains on three of the measures of oral language used in this research study (See Table 23).

Table 23

Oral language outcome data for Teina 31

ASSESSMENT MEASURE	TIME 1	TIME 2	TIME 3	TIME 4
Record of Oral Language Results (ROL) (42)	13	16	23	17
Auditory - Vocal Association (AVA) (26)	12	15	17	17
Junior Oral Screening Tool (J.O.S.T) (58)	33	34	44	43

The shaded areas signify when treatment was received.

Pair Number 4: Tuakana 40 and Teina 40

According to the information provided by Tuakana 40 on the tuakana checklist and summary sheets, Tuakana 40 and Teina 40 attended 17 of a potential 24 TALES sessions.

Pre treatment anecdotal observation of Tuakana 40:

Tuakana 40 was a Year 6 girl who considered herself to be Māori. Tuakana 40 was seen by teachers as seldom contributing in class or group discussions and being very quiet and shy. The key teacher selected Tuakana 40 with the learning intention that involvement in the TALES programme might help her to develop confidence so that she could contribute more, and be heard.

In Week 1 Tuakana 40 spoke very quietly. She was very shy, and not altogether comfortable speaking into the tape recorder. Generally she used language that is appropriate and that enabled the listener to interpret the message:

- 035 Tuakana 40 *Oh a plane.*
- 038 *Oh what do I do with these? (very quiet)*
- 039 Teina 40 *What is that?*
- 039 Tuakana 40 *It's something.*
- 040 *(Very quiet - Unclear)*
- 045 *That's my uh cake*
- 047 Teina 40 *(unclear) star/stuff?*
- 048 Tuakana 40 *Yes. I'm making my one up (Quiet – unclear).*
- 049 *Choose hearts.*
- 049 *Choose more pieces to make it more easier aye.*
- 050 *Okay there's (unclear – very quiet)*
- 057 *The heart.*

The learning intention for Tuakana 40 to talk louder was discussed in the Week 2 feedback and feed-forward session and some dubious advice given by a peer:

- 201 Tuakana 37 *Just imagine you're talking to someone else.*

- 202 Researcher Yeah.
- 202 Tuakana 37 *Imagine me trying, you giving me, trying to give me a hiding (unclear)*
- 203 Key Tchr 3 *(Little laugh), then she'll be loud [Tuakana 37] you reckon?*
- 204 Tuakana 37 Yeah.

Tuakana 40 was able to reflect on her practice in relation to the overall learning intention of being heard and contributing more (See Figure 12).

S Grant 2006

Week: **2**

Tuakana Checklist

Tuakana: **[Tuakana 40]** Complete with your teina Teina: **[Teina 40]** Date:

I REMEMBERED TO:	Box:	Tues	Wed	Thurs	Frid
	Date:	4	1	2	3
	30 th	31 th	1 st	2 nd	
Set up the tape before my teina comes		✓			
Talk a lot to the teina about what we were doing		✓			
Ask the teina what they wanted to play		✓			
Listen actively to my teina by		X			
• Making listening sounds e.g., mmm					
• My body language e.g., nodding, facing teina		✓			
Encourage my teina by smiling, being friendly, and praising them		X			
Say: The date and name on tape at the start and finish		X			
Hello & Goodbye		✓			
Their name lots		X			
Give my teina a sticker		✓			
Pack up gear		✓			
Date and name the tape		✓			
I achieved my personal goal this week		✓			

Personal goal
This week I am learning to: talk more & talk louder

I will know I have learned this when: I will be heard & I will be told that I spoke more

Any other comments:

 **[Tuakana 40]**, I liked how you completed both sides of the checklist. Remember to talk with **[Teina 40]**.

Figure 12: Tuakana 40 checklist and summary sheet for Week 2

In Week 2, Tuakana 40 already appeared more confident with using the tape recorder when beginning the session than she was in Week 1:

001 Tuakana 40 *First of eighth. Near Easter.*
 003 *Hi [Researcher].*
 004 *Shall we play with this?*
 005 Teina 40 *Yes.*
 009 *I wonder if the queen has this.*
 012 Tuakana 40 *She lives in a big house aye?*

Teina 40 was talking a lot more in Week 2 and spent some time engaged in egocentric speech as described by Vygotsky (1962) when playing with the 'Beauty and the Beast Castle'. She also indicated that she had been looking for Tuakana 40:

063 Tuakana 40 *This goes up there.*
 064 Teina 40 *Yeah. Where's it go?*
 067 *This is going to be pretty aye.*
 067 Tuakana 40 *What' that?*
 068 *Here I'll do that 'cos its too hard aye.*
 068 Teina 40 *Yeah.*
 070 *[Name] can do it. He's strong now.*
 072 *We put it. We put. Oah. We put the fire, um you put the fire into the.*
 076 *You put. You put. Oah. You don't put that there.*
 079 *You put the*
 083 *Okay. Put the books behind hey.*
Okay you put the over here.
 084 Tuakana 40 *This goes over here aye?*
 085 Teina 40 *Yeah.*
 085 *And the, she got pretty clothes, goes in here.*
 087 *I like her pretty clothes she's got.*
 090 *I was looking for you.*
 091 Tuakana 40 *When?*
 091 *That goes on (unclear)*

By Week 6 Tuakana 40 and Teina 40 were both talking more and had a balanced conversation about how it isn't good to swear:

- 078 Tuakana 40 *Oh, she's from the kindy aye?*
- 078 Teina 40 *Yeah.*
- 082 Tuakana 40 *(Unclear) has she been naughty to you?*
- 083 Teina 40 *Yeah. Cos of, cos she say the, say the F U.*
- 083 Tuakana 40 *Oh. That's naughty aye?*
- 084 Teina 40 *Yeah. Cos she was having a naughty talk.*
- 086 *I, I can fix this thing.*

Their conversation developed into a conversation about ages, high school and intermediate, a topic that was interesting and relevant to them:

- 087 Tuakana 40 *I know how old you are.*
- 088 Teina 40 *I'm going to be, I'm five (little laugh)*
- 089 Tuakana 40 *I'm ten.*
- 090 Teina 40 *I'm going to be six, now but I'm going up to be six next.*
- 091 Tuakana 40 *I'm going to be, going to, oh next year I'm going to go to intermediate.*
- 092 Teina 40 *Me too. Cos I'm going to go to mediate, soon.*
- 094 Tuakana 40 *Pardon?*
- 094 Teina 40 *After, after mediate I'm going to um um*
- 095 Tuakana 40 *High school aye? Aye?*
- 095 Teina 40 *Girls High!*
- 096 Tuakana 40 *That's high school.*
- 097 Teina 40 *Girls high?*
- 097 *I'm going to Girls High.*
- 098 Tuakana 40 *I'm going to, I'm going to, I'm going to, go to,*
- 099 *I don't know what high school that I'm going.*

The information provided by Teina 40 about what high school she will attend led to Tuakana 40 realizing that she didn't know what high school she will attend. It is possible that this triggered Tuakana 40 to do some further thinking, again underlining the potential reciprocal benefits of the tuakana and teina relationship.

Table 24 demonstrates throughout the six weeks, that although the 'Say' component of TALES was not demonstrated in the six five-minute probes, Tuakana 40 was able to implement four of the five TALES components successfully:

Table 24

Tuakana 40 and Teina 40 TALES component treatment integrity and number of words spoken in six five minute probes

School B 2006: Group 1 Pair 4	Total talk (others)	Teina 40			Tuakana 40					
		(Unclear)	Talk	Ask	(Unclear)	Talk	Ask	Listen	Encourage	Say
WEEK 1	0	6	92	18	5	164	38	14	3	0
WEEK 2	0	10	163	15	5	119	23	16	4	0
WEEK 3	34	10	165	32	2	69	12	16	1	0
WEEK 4	0	9	314	60	2	208	54	23	1	0
WEEK 5	0	9	274	27	4	146	37	24	2	0
WEEK 6	0	4	264	33	7	323	13	41	4	0
Mean	5.66	8	212	30.83	4.16	172	29.5	22	2.5	0
<i>Standard Deviation</i>	<i>13.88</i>	<i>2.44</i>	<i>84.81</i>	<i>16.04</i>	<i>1.94</i>	<i>87.5</i>	<i>16.4</i>	<i>10</i>	<i>1.4</i>	<i>0</i>

The learning intention for Tuakana 40 was that involvement in the TALES programme might help her to develop confidence so that she could contribute more. By Week 6 both Tuakana 40 and Teina 40 were talking substantially more. See the 'Talk' words spoken during the five minute probes in Figure 13.

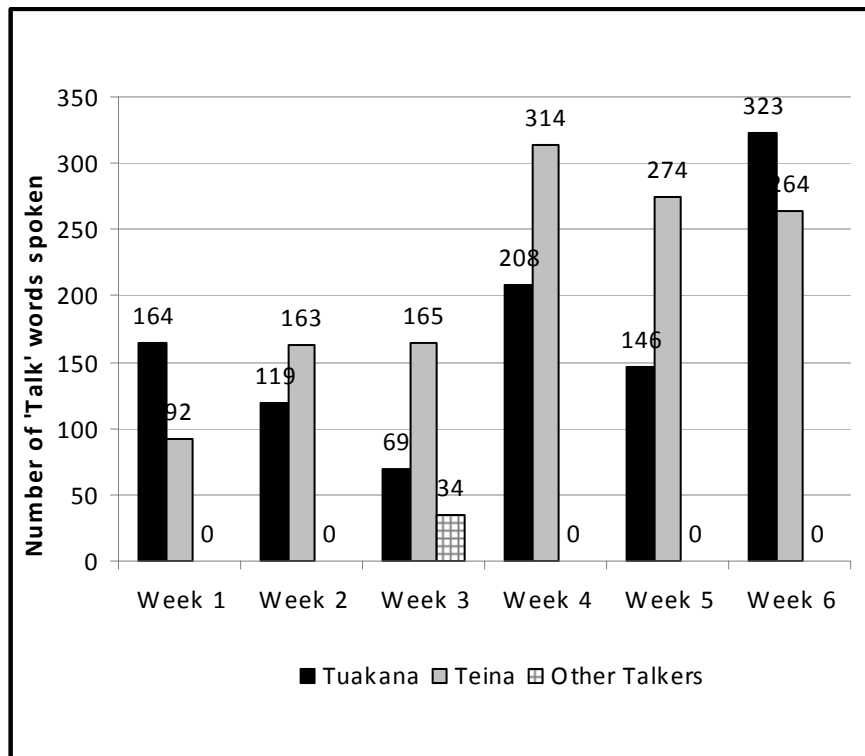


Figure 13: Tuakana 40 and Teina 40 total talk words spoken during six five minute probes

Figure 13 also demonstrates that Teina 40 was talking more, with a substantial increase in the number of talk words between Week 1 and Week 2 sustained and increased throughout the course of involvement in the TALES sessions. It appears possible that Tuakana 40 spoke less in response to the increased egocentric talk engaged in by Teina 40 in Week 2 and Week 3. This suggests a degree of sophistication on the part of Tuakana 40, in not responding to teina initiations that did not make sense to her.

The positive impact of involvement in the TALES programme is demonstrated in Teina 40's gains on the three measures of oral language used in this research study (See Table 25).

Table 25

Oral language outcome data for Teina 40

ASSESSMENT MEASURE	TIME 1	TIME 2	TIME 3	TIME 4
Record of Oral Language Results (ROL) (42)	9	16	12	17
Auditory - Vocal Association (AVA) (26)	13	15	14	18
Junior Oral Screening Tool (J.O.S.T) (58)	28	46	46	52

The shaded areas signify when treatment was received.

Pair Number 5: Tuakana 53 and Teina 53

According to the information provided by Tuakana 53 on the tuakana checklist and summary sheets, Tuakana 53 and Teina 53 attended 15 of a potential 24 TALES sessions.

Pre treatment anecdotal observation of Tuakana 53:

Tuakana 53 was a Year six boy who considers himself to be Pākeha. He was seen as shy and as rarely contributing to class and group discussions. His typical response when asked a question by the teachers was “I don’t know”. The key teachers selected Tuakana 53 with the learning intentions that involvement in the TALES programme might help develop his confidence so that he could contribute more.

In Session 1 of Week 1, Tuakana 53 contributed mainly one or two word utterances when opening the cash register while playing with shopping items:

- 005 Teina 53 *I not.*
- 006 *(Little laugh). That gave me a fright.*
- 008 Tuakana 53 *Oh. Turned off*
- 009 Teina 53 *When I opened it.*
- 009 Tuakana 53 *Mm*
- 009 Teina 53 *(Little laugh) goed like that.*
- 010 Tuakana 53 *Mm.*
- 010 Teina 53 *Oh man.*
- 012 Tuakana 53 *Stuff out?*
- 013 Teina 53 *Yes.*
- 014 *Oh. Just need this.*

However, by Week 2 there had been a shift. In the first feedback and feed-forward session, Key Teacher 5 played a five minute probe to the group and asked them to reflect on what Tuakana 53 had done effectively in Week 2:

- 174 Key Tchr 5 *Yeah I know put it there 'cause we need every week you get a new tape. It just gets a bit higgledy pigglety at the*

- beginning just because we're. That's on. Let's hear [Tuakana 53].*
- 176 Tape of Probe Tuakana 53: *That's the one. And what else shall we have on here?*
Teina 53: *(unclear)*
(Probe continues playing in background while Key Teacher 5 is talking)
- 178 Key Tchr 5 *Lovely clear talking [Tuakana 53]. Can I just see? Oh here.*
- 179 Tape of Probe Tuakana 53: *A racing car. Have you got*
(Probe continues playing in background)
- 179 Tuakana 55 *Oh yeah. [Teina 55] called out to um [Teina 53].*
- 180 Tape of Probe Tuakana 53: *What do you want out of the racing cars?*
(Lots of talking – reasonably clear – Teina 55 talking to Teina 53 also).
(Probe continues playing in background)
- 188 Tuakana 55 *Listen to [Teina 55].*
- 189 Tape of Probe Tuakana 53: *Ah let me see. I'll tick give my teina a sticker Etc. Put my name at the top of the cover. Oh yeah. Did I achieve my goal this week? Did I? Did I achieve my personal goal today?*
Teina 53: *Yeah.*
Tuakana 53: *Yes. I did.*
(Packing up talk)
- 196 Key Tchr 5 *Give him a big clap. That was outstanding.* (clapping noises)
- 198 Tuakana 53 (Little laugh). *That was yesterday.*
- 198 Key Tchr 5 *Well that was, where's your cover darling? Where's your? Is this your box? So why do you think that, why I said that was so outstanding?*
- 200 Tuakana 54 *Cause he was talking a lot.*
- 201 Tuakana 55 *He had a clear voice and he was sounding like he has fun.*
- 202 Tuakana 56 *It was close*
- 202 Tuakana 55 *That happened? (unclear)*
- 202 Key Tchr 5 *Hm?*
- 202 Tuakana 56 *It was close.*
- 202 Key Tchr 5 *Yes it was. Whereabouts do you sit when you're doing it? Cause it very close.*
- 203 Tuakana 55 *Mines about this far away.*
- 204 Key Tchr 5 *Yes and its best, and the other thing is, a bit like when [Key Teacher 5], it sounds like prattle, prattle, and [Key Teacher 5]'s saying 'I must get this ready, and I must get' and I'm kind of talking to myself and it sounds a bit strange doesn't it? But that's what you were doing [Tuakana 53]. You were doing the right thing. It sounded as if you were just talking*

to yourself, but every time you do that, you're exposing [Teina 53], and you'll be helping, cause can you understand what he's saying?

209 Tuakana 53 *Ah, ah, most of the time.*

Tuakana 53 spoke more confidently in the TALEs session with Teina 53, than in the feedback session with peers of his age and the key teacher. This appears to indicate that Tuakana 53 felt more comfortable talking in contexts where the topics of conversations were child led, rather than specified by the teacher.

In Week 2, Tuakana 53 confidently demonstrated at the beginning of the session that he knew what was required of him as a tuakana. He also demonstrated that he saw the audio tape recording as a vehicle for a conversation with Key Teacher 5 and the researcher, reflecting the participatory nature of his role in the research:

000 Tuakana 53 *[Key Teacher 5] It's me [Researcher] It won't work so I'm going to have to do it on the other side. There's no sticker, and [Teina 53]'s going to be coming with me in five minutes! And it's the tenth of the eighth of 06, so good, hello goodbye.*

006 *Hey yah [Teina 53]. How're yah doing?*

006 Teina 53 *Good.*

007 Tuakana 53 *We've got play dough and everything. What do you want to play today?*

008 *These, or play dough?*

008 Teina 53 *These*

009 Tuakana 53 *Okay.*

In Week 2, Tuakana 53 also demonstrated that he was monitoring where the tape recorder was, to ensure that the information collected for the research was clear:

027 Tuakana 53 *Need to keep it over here between us.*

028 Teina 53 *Yes.*

In the feedback and feed-forward session for Week 3, Key Teacher 5 played Tuakana 53's tape to the group to review. She provided him with positive

feedback and then asked him to reflect on what he was most pleased about, and whether he thought he had achieved his learning intention:

- 016 Key Tchr 5 *I'm just going to rewind a little bit of yours [Tuakana 53].*
- 017 Tuakana 53 *Mines on the A side.*
- 017 Key Tchr 5 *We'll just play and then we'll see. Have you been remembering to keep it up nice and*
- 019 Tuakana 53 *Um, my ones on, on the A side. Cause I tried it. I put it B. On the B side and then it wouldn't work.*
- 021 Key Tchr 5 *Oh wouldn't it? I wonder why that was. If that happens. If you find it doesn't work. It's really important that we record everything that you're doing. So please just, I don't mind you interrupting me cause its, we're all just a bit new at this. So how do you think, I'll just go rewind a bit. How's your week gone [Tuakana 53]? What's been the best thing?*
- 028 Tuakana 53 *Um Playing (unclear) and cause on Tuesday [Teina 53] was at the hospital sick.*
- [Group discussion about what to do when some one is away]

The difficulties that might arise if the tape recorder is fiddled with become the topic of conversation:

- 044 Tape of Probe
 Tuakana 53: *It could wreck, it could wreck the tape recorder okay.*
 Teina 53: *It might wreck the tape.*
 Tuakana 53: *Yeah. Okay. I might see you in the play ground okay?*
 Teina 53: *Yeah.*
 Tuakana 53: *Okay Bye.*
 Teina 53: *See ya*
 (continued farewells – unclear as Key Teacher 5 starts talking)
- 049 Key Tchr 5 *Did you listen to that? I just love the way you're going to make a connection outside the*
- 050 Tuakana 53 *Mm.*
- 051 Key Tchr 5 *Well done [Tuakana 53]. Because I can hear you doing modeling, but as we said, not accepting um bad behaviour. We want it, so we don't want fiddling with the tapes etc etc.*
- 055 Tuakana 54 *My one don't talk that much.*

Key Teacher 5 proceeded to direct several questions at Tuakana 53 who reverted to one or two words answers:

- 056 Key Tchr 5 *Oh well. I'll just get to yours in a second. So let's just see [Tuakana 53] how you got on here. And do you think you met your goal this time?*
- 060 Tuakana 53 *Yeah*
- 061 Key Tchr 5 *Pardon? What was the thing that you were most pleased about?*
- 061 Tuakana 53 *Ah. I don't know.*
- 062 Key Tchr 5 *Pardon?*
- 063 Tuakana 53 *Playing and that.*
- 063 Key Tchr 5 *What was the best game you played?*
- 064 Tuakana 53 *Um. I don't know. We played with the play dough*

Ironically, Key Teacher 5 continued to ask several questions while commenting on the requirement of *not* asking too many questions in the 'Ask' component of TALES. She provided some more feed-forward, and guided Tuakana 53 to reflect on how he was using the 'Ask' component of TALES. Tuakana 56 continued to respond with one or two word answers, highlighting the contrast in the nature of teacher directed language sessions and tuakana – teina conversations:

- 103 Key Tchr 5 *Okay you hold that one. We'll just do [Tuakana 53]'s*
- 103 Tuakana 56 *(Unclear)*
- 104 Key Tchr 5 *What about*
- 104 Tuakana 53 *Same*
- 104 Key Tchr 5 *Is he? Are you asking? You know how we said to not ask too many questions?*
- 106 Tuakana 53 *Mm.*
- 106 Key Tchr 5 *But do you ask him a question sometimes?*
- 107 Tuakana 53 *Yeah.*
- 107 Key Tchr 5 *And does he just go 'yeah' or 'no' or does he answer?*
- 108 Tuakana 53 *He always answers.*
- 109 Key Tchr 5 *Does he answer really fully? Or does he just say a one word answer?*
- 110 Tuakana 53 *He answers really fully.*
- 111 Key Tchr 5 *Oh does he? What else could you do?*

- 111 Tuakana 53 *Um.*
- 112 Key Tchr 5 *Do you want to do keep doing more talking?*
- 112 Tuakana 53 *Um.*
- 113 Key Tchr 5 *Or do you want to encourage him a little bit more? Why don't you say, why, if they're getting happy with talking, why don't you see if you can ask them what, where, how, why. Say why did you like playing with the play dough?*
- 115 Tuakana 53 *Mm.*
- 115 Key Tchr 5 *And if they go 'I don't know.' Why don't you say 'I really liked the play dough 'cause its squishy and I can roll it and I can make things that are long and thin'. And so if they say they don't know you do all the talking. It sounds as if*
- 119 Tuakana 54 *[Teina 54] (unclear) ask*
- 120 Key Tchr 5 *You're asking too many things, but*
- 120 Tuakana 53 *Mm*
- 120 Key Tchr 5 *Or doing too much talking*
- 121 Tuakana 53 *Mm*
- 121 Key Tchr 5 *But um. It won't be. So just, just try to do a little bit like that. And then how I know I've been um know I will know this I will know I have learnt this when I hear [Teina 53] maybe using some of your words?*
- 127 Tuakana 53 *Mm.*
- 128 Key Tchr 5 *Using some of my words / his words. Okay thank you thank you. Are you, you could hippity hop, so you've got your new one for tomorrow?*
- 131 Tuakana 53 *Mm*
- 131 Key Tchr 5 *Put all the rubbish away thanks. Thanks for that.*
- 132 Tuakana 53 *Alright*

It is interesting to see that Key Teacher 5 modeled to Tuakana 53 what might be said if Teina 53 responded with “I don’t know” to a question, and demonstrated the behavior that was not wanted from Tuakana 53.

In Week 3, although Tuakana 53 missed answering an important question, it was evident that the relationship between Tuakana 53 and Teina 53 had moved out to other settings providing greater opportunities for Teina 53 to be engaged in conversations with Tuakana 53:

069 Teina 53 *(little laugh)*

070 *What's your name again?*

070 Tuakana 53 *This one.*

071 Teina 53 *Can I choose another one?*

072 Tuakana 53 *Mm. Oah, alllllright. Alright.*

073 Teina 53 *I got this one, 'cos its way cool*

074 Tuakana 53 *Okay.*

075 *Oh. It stuck to my thumb.*

076 *You go and get your lunch and that. Okay?*

077 Teina 53 *BYE. See you at play time.*

077 Tuakana 53 *Yeah. Okay. See yah. See yah on the, on the play ground.*

079 Teina 53 *Yeah. I'll see you on the play ground again.*

080 Tuakana 53 *Yeah*

080 Teina 53 *(unclear) By slide (unclear)*

080 Tuakana 53 *Okay. Whatever.*

In Week 4 Tuakana 53 sounded confident and assured as he again demonstrated self monitoring and how comfortable he was with the process of tape recording and the responsibilities of tuakana. The usefulness of the tuakana checklist and summary sheet as a reminder of what to do was also evident:

000 Tuakana 53 *[Key Teacher 5] and [Researcher]. This is [Tuakana 53]. It's the 29th of eighth 06.*

002 *I'm just going to go and get my Teina.*

004 *Then, we're going to start playing and that.*

005 *Yeah. It's a lovely day.*

006 *Nn I look pretty good.*

008 *Week 4 of the TALEs thing.*

010 *Oh. Ah. Checklist.*

012 *(Funny noises – little laugh)*

013 *Ah do that*

015 *Now I know what's today date*

016

018 *Twenty ninth eighth, 06,*
 019 *Oah set up tape recorder before Teina comes? Yeah.*
 020 *Hey.*
 021 *I'm just going to put pen in and (unclear) and*
 022 *Just going to get me teina.*
 023 *Oh, just going to turn it off.*
 024 *No. 'Cos it's not going to wind up properly yet.*
 025 *It'll wind up. But not yet.*

In the Week 5 feedback and feed-forward session Tuakana 55 and Tuakana 53 talked about Teina 53 greeting them with a 'thumbs up' sign in other contexts:

207 Tuakana 55 *Every time, every time [Teina 53] sees me and [Tuakana 53] he goes like this.*
 208 Tuakana 56 *Fill in the back*
 209 Tuakana 55 *Puts his thumb up. Or two. He did that when we were racing and I did it back. (little laugh)*
 210 Researcher *That's nice aye.*
 210 Tuakana 53 *Who [Teina 53]?*
 210 Tuakana 55 *Yeah.*
 211 Tuakana 53 *He turned around and saw me.*

By Week 6 Tuakana 53 demonstrated that he was confidently able to take on the assigned role of tuakana. He showed how he was able to initiate conversations both with the key teachers within the 'taped conversation' for research and feedback purposes, and with Teina 53 during the TALES session:

000 Tuakana 53 *Hey [Researcher] and [Key Teacher 5]. It's Monday the, hmm, it's the eleventh, September 06. So for 2006. And um, it's a crappy day out here. And there's a, [Other teacher]'s deck is slippery so it's pretty cool, 'cos I can slide, like this, woooah, nearly fell over for a second there. Just going to go and get [Teina 53].*
 011 *Won't be a sec.*
 014 Other student *[Teina 53] [Teina 53]*
 016 Tuakana 53 *Yeah. Okay.*

018 *Allowed to come?*

020 *Now tell me which of the boxes is different.*

021 Teina 53 *Number one again!*

022 Tuakana 53 *Hoh.*

022 Teina 53 *I had a dream last night.*

022 Tuakana 53 *Different box*

023 Teina 53 *I had a dream in the night.*

023 Tuakana 53 *What? What did you dream about?*

024 Teina 53 *Nothing.*

025 Tuakana 53 *Now [Other tuakana and teina] aren't here today. Oh, [Tuakana]'s here but she's doing the jump jam hip hop thing okay.*

028 Teina 53 *We go over here then.*

029 Tuakana 53 *Mm*

029 Teina 53 *Aaagh.*

029 Tuakana 53 *Don't worry. It's on.*

030 *Now. What do you want to play with today?*

Tuakana 53 has demonstrated that he was successfully able to implement consistently the five TALES components (See Table 26).

Table 26

Tuakana 53 and Teina 53 TALEs component treatment integrity and number of words spoken in six five minute probes

School C 2005: Group 2 Pair 5	Total talk (others)	Teina 53			Tuakana 53					
		(Unclear)	Talk	Ask	(Unclear)	Talk	Ask	Listen	Encourage	Say
WEEK 1	6	7	137	51	6	271	80	20	4	2
WEEK 2	0	14	198	61	6	308	34	24	2	2
WEEK 3	15	8	110	31	5	301	15	16	2	5
WEEK 4	0	12	211	58	8	282	57	31	2	0
WEEK 5	0	2	297	46	5	270	51	37	3	0
WEEK 6	17	5	183	28	4	325	73	27	7	1
Mean	6.33	8	189.3	45.83	5.67	293	51.7	26	3.3	1.67
<i>Standard Deviation</i>	<i>7.86</i>	<i>4.42</i>	<i>65.13</i>	<i>13.73</i>	<i>1.36</i>	<i>22.1</i>	<i>24.3</i>	<i>7.6</i>	<i>2</i>	<i>1.86</i>

It was evident from the transcripts and treatment integrity data information from the six five minute probes that Tuakana 53 had developed confidence and was contributing more in tuakana – teina sessions. However, it was also evident from the transcripts of sections of feedback and feed-forward sessions that Tuakana 53 reverted to one or two word answers, when too many questions were asked, and conversations were constrained by the structure and direction specified by the teacher. The number of words spoken by Tuakana 53 in the transcripts was consistently close to or higher than, the mean number of words spoken by the six randomly selected tuākana (See Figure 14).

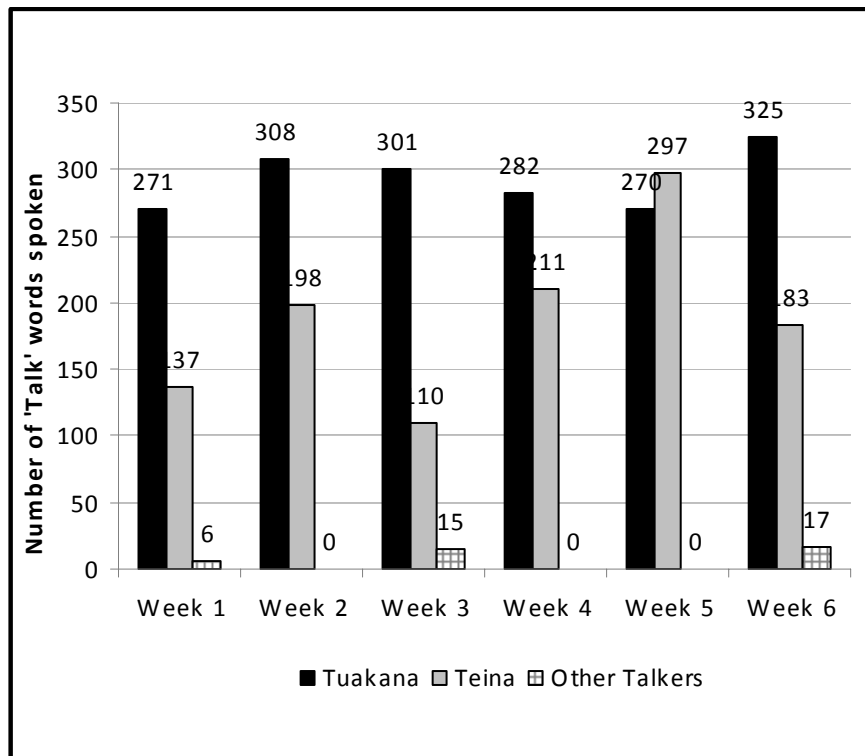


Figure 14: Tuakana 53 and Teina 53 total talk words spoken during six five minute probes

Teina 53 spoke more in Weeks 2, 4, 5 and 6. Table 27 demonstrates the gains made by Teina 53 on three of the oral language measures used in this research study:

Table 27

Oral language outcome data for Teina 53

ASSESSMENT MEASURE	TIME 1	TIME 2	TIME 3	TIME 4
Record of Oral Language Results (ROL) (42)	1	6	11	10
Auditory - Vocal Association (AVA) (26)	3	13	17	15
Junior Oral Screening Tool (J.O.S.T) (58)	32	36	47	47

The shaded areas signify when treatment was received.

Pair Number 6: Tuakana 62 and Teina 62

According to the information provided by Tuakana 62 on the tuakana checklist and summary sheets Tuakana 62 and Teina 62 attended 14 of a potential 24 TALES sessions.

Pre treatment anecdotal observation of Tuakana 62:

Tuakana 62 was a Year 6 girl who considers herself to be Pākeha. Key teachers felt that she experienced ‘social difficulties’ and that she was ‘intolerant’ of others. The key teacher selected Tuakana 62 with the learning intentions that involvement in the TALES programme might provide opportunities for her to practice social skills, and develop greater tolerance.

In Week 1, Tuakana 62 demonstrated that she was able to initiate and maintain a conversation even when there was little response from Teina 62. She also showed that she was able to perform some of the tasks required to fulfill the tuakana role:

- 000 Tuakana 62 *Hello [Researcher].*
- 002 *Its [Tuakana 62] speaking. It's the.*
- 007 *22nd, of mm, of May, on Monday.*
- 017 *Hi [Researcher]. It's the 22nd of May.*
- 018 *On Monday.*
- 023 *Have you got a brother and sister?*
- 024 *What're their names?*
- 025 Teina 62 *(Unclear [name 1]), [Name 2], and (Unclear – [Name 3])*
- 026 Tuakana 62 *Who is it?*
- 026 *[Name 2] and?*
- 027 Teina 62 *(Unclear – [Name 3]).*
- 027 Tuakana 62 *Oh yeah.*
- 028 *Cool.*
- 028 *What's your mum's name?*
- 029 *Don't you know your mum's name?*
- 030 *Okay. Um.*
- 032 *Okay, so like, what we're doing is like, we're just*

051 Tuakana 62 *I think that's the fridge.*
 052 *That's a fridge. Here we go, and,*
 053 *That is stuff for food to go in.*
 054 *What do you think that is?*
 055 *That's a, um, that's a oven thing, where you bake*
and stuff.
 057 *Cool aye?*
 058 *And, the tap and that.*
 058 *That doesn't work (little laugh).*
 059 *Where do you want to put that?*
 060 *You can put it down.*
 061 *What do you think that is?*
 062 *Ch?*
 062 Teina 62 *Chicken.*

Although in most instances Teina 62 hadn't responded to questions, Tuakana 62 kept up the pace of language by modeling the answers herself or by leading Teina 62 to the answer by providing some support, for example Tuakana 62 led Teina 62 to the correct answer 'chicken' by providing her with the clue 'ch'. Tuakana 62 used many 'what' and 'where' questions that might be considered 'open questions', however in the Week 1 five minute probe Teina 62 usually provided only one word answers. Nevertheless, Tuakana 62 persevered and continued to talk in a friendly manner as she was trained to, and in many instances provided input plus one, naturally building on the one word response provided by Teina 62. This supports Krashen's (1987) suggestion that roughly tuned input occurs naturally.

In the feedback and feed-forward session in Week 2, Key Teacher 8 discussed Tuakana 62's learning intention to talk more (See Figure 15).

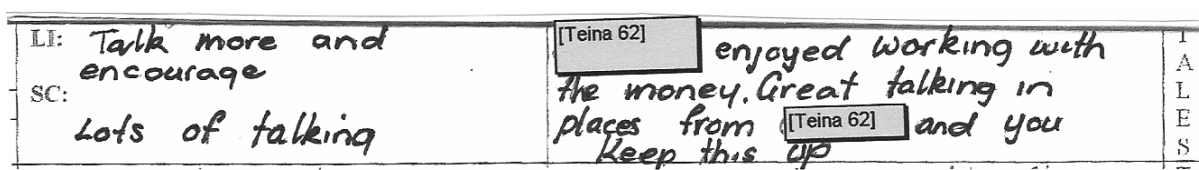


Figure 15: Key teacher written feedback and feed-forward for Tuakana 62 in Week 2

Key Teacher 8 also shared with Tuakana 62 how pleased she was that Teina 62 was answering the roll and talking in class:

- 055 Key Tchr 8 *.... It's wonderful to hear [Teina 62] talking. She's quite clear too, on the tape.*
- 056 Tuakana 62 *Mm.*
- 057 Key Tchr 8 *And, she's talking lots more, and using sentences, and she's actually talking in the classroom now which is really good. And, , answering the roll which she never used to do.*
- 060 Tuakana 62 *Mm.*
- 061 Key Tchr 8 *And actually this morning she came up to me and she said 'Oh [Key Teacher 8] I'm buying lunch'. And she never used to even initiate a conversation.*
- 063 Tuakana 61 *Cause when we*
- 063 Key Tchr 8 *So that's really positive (spoke at the same time)*
- 064 Tuakana 61 *When we done our hot cross buns with yous, like when you called out for the roll she just goes, she's like sort of murmured, like mm*
- 065 Key Tchr 8 *Mm. She usually just, she used to just put her head down. She's very shy. So that's really positive isn't it?*
- 067 Tuakana 62 *Yeah but like when I say 'oh hi [Teina 62]', she like goes like this, puts her head down,*
- 069 Key Tchr 8 *Yeah, but she's talking lots more*
- 069 Tuakana 62 *And then I say 'oh shall we, shall we see what we've got in the box today?' and she's like 'Mm' (little laugh)*
- 071 Key Tchr 8 *But do you notice that um, that she told you that she didn't want to play with those farm animals. Didn't she?*
- 073 Tuakana 62 *Mm.*
- 073 Key Tchr 8 *Well she wouldn't of said that before*
- 074 Tuakana 62 *Mm*
- 074 Key Tchr 8 *Would she?*
- 074 Tuakana 62 *She said 'I don't like these'.*
- 075 Key Tchr 8 *Mm. Yeah.*

By Week 6 Teina 62 initiated conversation topics and responded appropriately to questions, while displaying some of the social courtesies specific to conversations, including turn taking and listening to the speaker. Teina 62 used questions both to

obtain what she would like, as well as to clarify information while playing with the play dough:

- 069 Teina 62 *Can we make us a ball?*
- 070 Tuakana 62 *A what?*
- 071 Teina 62 *A ball.*
- 071 Tuakana 62 *Okay, we'll change it.*
- 076 *I'm just going to do this.*
- 076 Teina 62 *Is that a ball?*
- 077 Tuakana 62 *No.*
- 077 Teina 62 *Is this a, this play dough soft.*
- 079 *[Teina 63].*
- 081 *Can't cause we need the ball first.*
- 081 Tuakana 62 *Okay.*
- 082 *Catch.*
- 083 Teina 62 *(laughing)*
- 086 *Make a bigger one.*

Tuakana 62 demonstrated that she was able to provide game playing instructions for Teina 62. Teina 62 has moved from one word responses to sentences that were beginning to convey her opinions:

- 100 Teina 62 *It's cold aye?*
- 100 Tuakana 62 *Mm*
- 101 Teina 62 *Oh. Let's go like this, and I'll put, and I'll try and catch it with one hand and the hard push, can I? Squash.*
- 103 Tuakana 62 *Go. Yeah, yeah. You go like this at the same time that you have to catch the other one too. Okay? Okay. Ready set go.*
- 106 *That's it, then you need to throw it up in the air same time.*
- 106 Teina 62 *Oh.*
- 107 Tuakana 62 *And then when it comes down to me I'm supposed to catch it (unclear) okay?*
- 108 *Ready, set, go.*

108 Teina 62 *I need to make my ball again.*
109 Tuakana 62 *Oh*
109 Teina 62 *Ah, she's got a bigger one than you!*
110 Tuakana 62 *Ah. She has.*

It is also evident that Teina 62 was having fun with Tuakana 62:

112 Tuakana 62 *Go.*
113 *Hey you have to throw your one up.*
113 Teina 62 *Mm.*
113 Tuakana 62 *So you go up.*
113 Teina 62 *Yes.*
113 Tuakana 62 *Ready*
113 *Set*
114 Teina 62 *Go*
114 Tuakana 62 *Go*
114 Tuakana 62 and Teina 62 *(Loud laughing)*
115 Tuakana 62 *You have to catch it when you (unclear)*
115 *Look at what they're doing. Watch this.*
116 *Okay ready? Ready set go.*
117 *Here you are.*
118 *Ready set go.*
119 Teina 62 *Oah. We didn't catch it aye?*
119 Tuakana 62 *Go!*
120 Teina 62 *Oah. I caught it!*
120 Tuakana 62 *Cool!*

It is clear from the transcripts that Tuakana 62 has experienced success in implementing the TALEs programme with Teina 62. Tuakana 62 demonstrated appropriate social skills in this context, and she was able to implement all of the

components of TALES (See Table 28). Key teachers both reported that they believed that involvement in the programme had been very beneficial for Tuakana 62, suggesting that the social skills demonstrated had generalized to other settings such as in her classroom.

Table 28

Tuakana 62 and Teina 62 TALES component treatment integrity and number of words spoken in six five minute probes

School D 2006: Group 1 Pair 6	Total talk (others)	Teina 62			Tuakana 62					
		(Unclear)	Talk	Ask	(Unclear)	Talk	Ask	Listen	Encourage	Say
WEEK 1	0	3	11	1	2	313	130	6	11	0
WEEK 2	32	7	154	82	3	325	55	21	2	0
WEEK 3	0	2	138	22	1	285	102	30	13	1
WEEK 4	5	2	121	35	1	248	84	26	18	1
WEEK 5	47	5	95	26	3	242	88	22	10	0
WEEK 6	70	5	161	29	3	250	59	27	5	0
Mean	25.66	4	113.33	32.5	2.16	277.17	86.33	22	9.83	0.33
<i>Standard Deviation</i>	<i>29.00</i>	<i>2</i>	<i>55.5</i>	<i>26.88</i>	<i>0.98</i>	<i>35.94</i>	<i>27.89</i>	<i>8.50</i>	<i>5.70</i>	<i>0.51</i>

Tuakana 62 demonstrated the capacity for tolerance by consistently maintaining a high number of talk words, even when [Teina 62] was unresponsive in week 1 (See Figure 16).

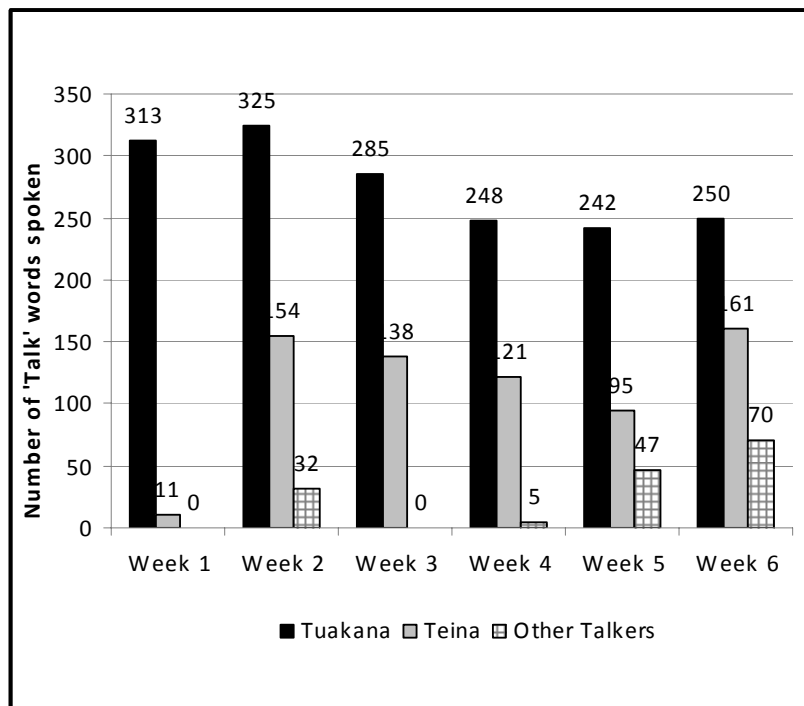


Figure 16: Tuakana 62 and Teina 62 total talk words spoken during six five minute probes

Figure 16 also demonstrates the rapid and large increase in the number of words spoken by Teina 62 between Week 1 and Week 2. This large increase in the number of words spoken is sustained throughout the programme. Table 29 demonstrates the gains made by Teina 62 on three of the oral language measures used in this research study:

Table 29

Oral language outcome data for Teina 62

ASSESSMENT MEASURE	TIME 1	TIME 2	TIME 3	TIME 4
Record of Oral Language Results (ROL) (42)	5	10	9	12
Auditory - Vocal Association (AVA) (26)	11	18	17	16
Junior Oral Screening Tool (J.O.S.T) (58)	36	47	44	45

The shaded areas signify when treatment was received.

The qualitative analysis of the transcribed tapes demonstrated that the learning intentions of the tuākana delivering the TALES programme were met. The usefulness of the five minute probes and feedback and feed-forward sessions for formative assessment purposes was also demonstrated.

This section has provided a range of examples of treatment fidelity and integrity of tuākana implementing TALES, including the ‘number one goal’ of TALES, to

get the teina to ‘talk more,’ and of how they followed the ‘number one rule’ of TALEs, to ‘have fun’ when using the TALEs components.

Having examined the qualitative data on six tuakana and teina pair’s interactions, and noted how these interactions improved and elaborated over the six weeks, the following section of this chapter examines the quantitative oral language outcome data for the 72 teina students, on the three key oral language measures (ROL, AVA, and JOST).

Quantitative outcomes: teina student achievement

Oral language outcome data for teina

Teina response data was analysed using the Statistical Package for the Social Sciences (SPSS). Teina scores on three measures were analysed: the Record of Oral Language (ROL) (Clay et al., 1983), Auditory – Vocal Association Assessment of Verbal Attainments (AVA) (Special Education Service, n.d.), and Junior Oral Screening Tool (JOST) (Ministry of Education, 2003c). These measures were taken four times, at six week intervals, for all three groups of teina from each school. The multiple baseline design which was used, allowed comparisons of pre-treatment, in- treatment (shaded cells) and not-in-treatment data. No group had received treatment at Time 1. Group 1 had received treatment at Time 2. Group 2 had received treatment at Time 3. Group 3 had received treatment at Time 4 (See Table 30 (A)).

Table 30 (A)

Teina JOST scores across four time points (Max score: 58)

J.O.S.T (58)	Time 1	Time 2	Time 3	Time 4
Group 1 Mean	33	42	41	42
<i>Std Dev</i>	6.32	5.41	5.72	5.21
Group 2 Mean	32	36	46	44
<i>Std Dev</i>	4.89	5.16	4.24	2.65
Group 3 Mean	37	39.5	43	50
<i>Std Dev</i>	4.57	3.18	3.73	3.61

Table 30 (B)

Teina AVA scores across four time points (Max score: 26)

A.V.A (26)	Time 1	Time 2	Time 3	Time 4
Group 1 Mean	11	14	14	14
<i>Std Dev</i>	3.14	2.75	3.14	3.17
Group 2 Mean	11	13.5	16	15
<i>Std Dev</i>	2.33	1.77	2	2.77
Group 3 Mean	12.5	14	15	18
<i>Std Dev</i>	1.88	1.31	1.56	1.60

Table 30 (C)

Teina ROL scores across four time points (Max score: 42)

R.O.L (42)	Time 1	Time 2	Time 3	Time 4
Group 1 Mean	12	18	16	17
<i>Std Dev</i>	4.12	3.54	4.65	4.12
Group 2 Mean	12	12.5	19	17
<i>Std Dev</i>	3.44	4.02	3.77	3.56
Group 3 Mean	16	17	19	24
<i>Std Dev</i>	4.41	3.99	3.15	2.83

Tables 30(A), 30(B), and 30(C) indicate that no student reached the potential score for any of the three measures used, indicating that there was no ceiling effect operating. The multiple-baseline shows, that although there are upward trends in the repeated measures for Group 2 and Group 3 the ‘step up’ at intervention times shows the most change. (See Figure 17: ‘Junior Oral Screening Tool (JOST) mean results for teina’), Figure 18: ‘Auditory – Vocal Association (AVA) mean results for teina’, and Figure 19: ‘Record of Oral Language (ROL) mean results for teina’

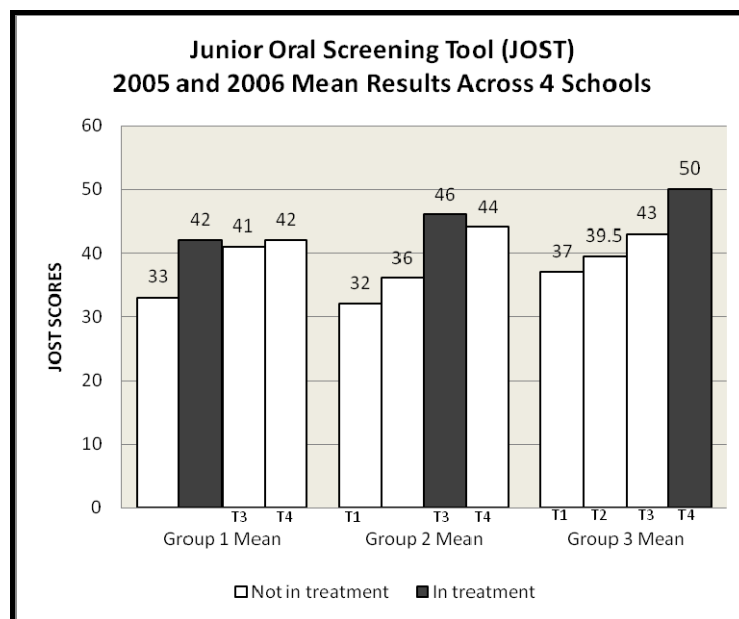


Figure 17: Junior Oral Screening Tool (JOST) mean results for teina

While the JOST assessment tool has “no pass or fail criteria” (Ministry of Education, 2003c, p 3), the most significant gains for all three groups were pre and post the six week period that the groups received treatment.

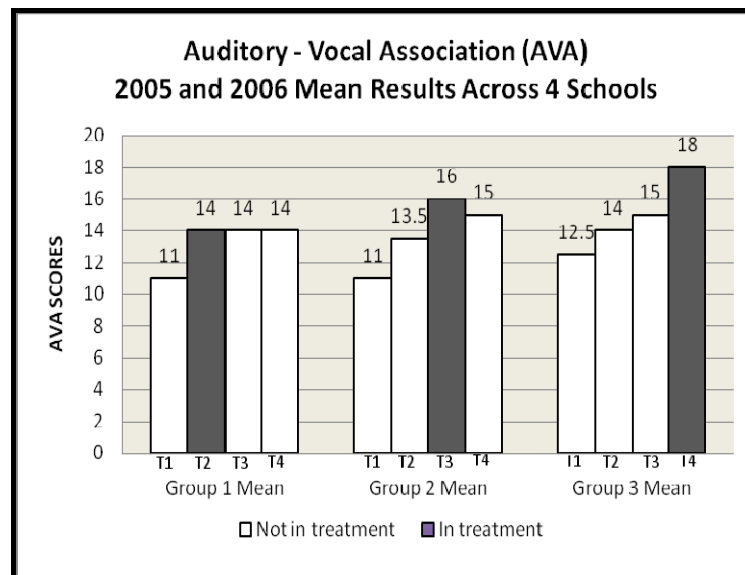


Figure 18: Auditory – Vocal Association (AVA) mean results for teina

The AVA assessment endeavours to provide an indication of what level of oral language might be expected at what developmental age (Adapted from McCarthy & Kirk, (1961) as cited in Special Education Service, n.d. See Appendix 1 p.2):

SCORE INTERPRETATION (=low verbal attention)

- | | | |
|-----------------------|----------------------|-----------------------|
| 1 = 2 years 5 months | 2 = 2 years 6 months | 3 = 2 years 8 months |
| 4 = 2 years 10 months | 5 = 3 years 1 month | 6 = 3 years 3 months |
| 7 = 3 years 6 months | 8 = 3 years 8 months | 9 = 3 years 11 months |

Needs story telling by the teacher / parent / aide; role-play; required a non-reading programme.

- | | | |
|------------------------|-----------------------|-----------------------|
| 10 = 4 years | 11 = 4 years 5 months | 12 = 4 years 8 months |
| 13 = 4 years 11 months | 14 = 5 years | 15 = 5 years 6 months |
| 16 = 5 years 11 months | 17 = 6 years 1 month | 18 = 6 years 6 months |
| 19 = 6 years 10 months | 20 = 7 years 3 months | |

Caption books / picture / word matching / alphabet / emergent reading

(Adapted from McCarthy & Kirk, (1961) as cited in Special Education Service, n.d. p.2)

The validity of such score interpretation is somewhat questionable and also places some limitations in the data analysis of the AVA assessment using the mean scores in the multiple baseline design, as different scores receive different ‘weighting’ in the score interpretation sheet. However, when the AVA scoring analysis sheet is used to interpret the raw scores the gains demonstrated during the six week intervention period highlight the educational significance of the results.

The mean score for Group 1 immediately prior to intervention was 11 (4 years 5 months). Group 1 moved to a mean score of 14 (5 years) during the six week

period of intervention. Using the AVA interpretations of levels Group 1 demonstrates a mean gain of 7 months in a six week period.

The mean score using the AVA assessment tool for Group 2 immediately prior to the six week intervention was 13.5 (between 4 years 11 months and 5 years). While Group 2 had demonstrated nearly seven months gain over the first six week period when the intervention was not in place, the most significant gain was during the intervention period where the mean score moved from 13.5 (between 4 years 11 months and 5 years) to a mean score of 16 (5 years 11 months), demonstrating a mean gain of 11 months in the six week intervention period.

Group 3 also demonstrated maturation gains of between 8 and 10 months in the twelve weeks prior to the six week intervention period moving from an initial mean score of 12.5 (between 4 years 8 months and 4 years 11 months) to a mean score of 15 (5 years 6 months). However, using the AVA score interpretation Group 3 also made the most gain during the six week intervention period moving from a mean score of 15 (5 years 6 months) to a mean score of 18 (6 years 6 months), demonstrating a gain of 1 year in a six week period.

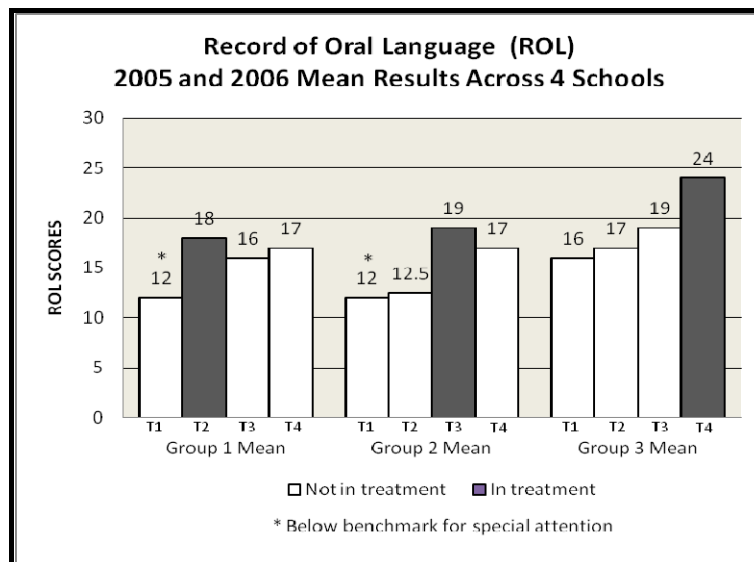


Figure 19: Record of Oral Language (ROL) mean results for teina

The ROL scores show a marked shift for groups 1 and 2 from scores below the benchmark of 13 that Clay et al.,(1983) suggest children should be provided with “special attention in oral language development” (p.29). Group 1 moved from a

mean score of 12 to a mean score of 18 in six weeks. Group 2 moved from a mean score of 12.5 to a mean score of 19 in six weeks. Using the benchmark of 13 the higher scores suggest that there is no longer a requirement for special attention.

The starting point for Group 3 differed somewhat in that it was already above the benchmark of 13, perhaps in part explaining the upward trend demonstrated by this groups results prior to the six week intervention period. However, the most significant step up was still at intervention time with a gain of five from a mean score of 19 to a mean score of 24.

The AVA and ROL results suggest that the starting point impacts on the amount of growth attained i.e. the higher the started point the greater and more accelerated the growth.

In order to corroborate the pattern in quantitative findings arrived at through visual inspection with the multiple baseline format, these data were analysed using the SPSS package. Paired samples *t*-test analyses were conducted because within the three teina student groups, test scores were compared employing a single group quasi-experimental design (Morgan, Gliner & Harmon, 2006). Alpha was set at $p \leq .05$. Effect sizes were also calculated to assess the strength of the mean differences observed (Watkins, 2003). Effect sizes were calculated as the difference between means, divided by pooled standard deviations.

Group 1 Teina results

Group 1 of the teina students consisted of 24 participants made up of six sets of four students from four schools over two years. During the course of the study 2 participants left Group 1, leaving an N of 22. The teina students in Group 1 received the tuakana led TALES intervention between the first and second time the three tests were administered, (between Time 1 and Time 2).

Table 31

GROUP 1 TEINA STUDENTS
Paired Samples t Test comparing Group 1 teina students' average JOST test scores
over six time intervals

	n	M	SD	<i>t</i>	<i>p</i>	<i>d</i>
JOST – Time 1 & 2				-8.424	<.001	.75
Time 1	24	33.00	11.924			
Time 2	24	41.88	11.233			
JOST – Time 1 & 3				-8.363	<.001	.74
Time 1	23	32.70	12.096			
Time 3	23	41.09	10.233			
JOST – Time 1 & 4				-7.844	<.001	.65
Time 1	22	32.18	12.121			
Time 4	22	42.45	10.428			
JOST – Time 3 & 4				-2.249	.035	.14
Time 3	22	40.95	10.454			
Time 4	22	42.45	10.428			

Note: *n*= The number of participants in the sample; *M*=The mean, which is simply the average of all the items in the sample.; *SD*=The standard deviation, is a measure of how spread out the data is; *t*- The *t* statistic is a measure of how extreme a statistical estimate is; *p*= A *p*-value is a measure of how much evidence we have against the null hypotheses of zero difference; *d*= Commonly called effect size, it is the difference between the means, $M_1 - M_2$, divided by pooled standard deviation. The pooled standard deviation is found as the root mean square of the two standard deviations (Cohen 1988).

Data in Table 31 report the JOST test scores outcome of the paired samples *t* tests for Group 1 teina students. Table 31 shows that the JOST test scores for Group 1 teina students on average were significantly higher at the later test time than the earlier test time for four of the six test intervals. Further analysis reveals the following statistically significant differences between these scores: (a) Time 1 & 2 $t(23)$ -8.424, p <.001, (b) Time 1 & 3 $t(22)$ -8.363, p <.001, (c) Time 1 & 4 $t(21)$ -7.844, p <.001, and (d) Time 3 & 4 $t(21)$ -2.249, p =.035.

An effect size calculator (Watkins, 2003) was used to determine the standardized effect size (*d*) between the test scores for the earlier time (pre-treatment condition) and the later time (post-treatment condition) using the pooled standard deviation. Results were interpreted using Hedges *g* (Hedges & Olkin, 1985) to determine the strength of the difference between variables. The strength of these differences were; typical, to larger than typical, for Time 1 & 2 (d =.75, Time 1 & 3 (d =.74), and Time 1 & 4 (d =.65), and; much smaller than typical, to smaller than typical,

for Time 3 & 4 ($d=.14$) (Cohen, 1988; Morgan et al., 2006). These results reveal that the effect size of mean differences between the earlier and later test scores is substantially more than the threshold level set by Fashola and Slavin (1998) ($d=.25$) for three of the four time intervals. The lack of mean difference and minimal effect size for the Time 3 & 4 comparison, likely indicates that the gains made following the TALES intervention (Time 1 / Time 2) were maintained, but did not further increase.

Table 32

GROUP 1 TEINA STUDENTS
Paired Samples *t* Test comparing Group 1 teina students' average AVA test scores
over six time intervals

	n	M	SD	<i>t</i>	<i>p</i>	<i>d</i>
AVA – Time 1 & 2				-6.731	<.001	.61
Time 1	24	11.29	4.974			
Time 2	24	14.38	5.029			
AVA – Time 1 & 3				-5.937	<.001	.57
Time 1	23	11.17	5.051			
Time 3	23	14.09	4.981			
AVA – Time 1 & 4				-6.882	<.001	.67
Time 1	22	11.00	5.099			
Time 4	22	14.50	5.152			

Data in Table 32 report the AVA test scores outcome of the paired samples *t* tests for Group 1 teina students. Table 32 shows that the AVA test scores for Group 1 teina students on average were significantly higher at the later test time than the earlier test time, for three of the six test intervals. Further analysis reveals the following statistically significant differences between these scores: (a) Time 1 & 2 $t(23)=-6.731, p<.001$, (b) Time 1 & 3 $t(22)=-5.937, p<.001$, and (c) Time 1 & 4 $t(21)=-6.882, p<.001$.

An effect size calculator (Watkins, 2003) was used to determine the standardized effect size (*d*) between the test scores for the earlier time (pre-treatment condition) and the later time (post-treatment condition) using the pooled standard deviation. Results were interpreted using Hedges *g* (Hedges & Olkin, 1985) to determine the strength of the difference between variables. The strength of these differences

were typical, to larger than typical, for Time 1 & 2 ($d=.61$), Time 1 & 3 ($d=.57$), and Time 1 & 4 ($d=.67$) (Cohen, 1988; Morgan et al., 2006). These results reveal that the effect size of mean differences between the earlier and later test scores is substantially more than the threshold level set by Fashola and Slavin (1998) ($d=.25$) for these three time intervals.

Table 33

GROUP 1 TEINA STUDENTS
Paired Samples *t* Test comparing Group 1 teina students' average ROL test scores
over six time intervals

	N	M	SD	<i>t</i>	<i>p</i>	<i>d</i>
ROL – Time 1 & 2				-8.936	<.001	.72
Time 1	24	12.13	7.508			
Time 2	24	18.21	9.017			
ROL – Time 1 & 3				-11.612	<.001	.58
Time 1	23	12.09	7.675			
Time 3	23	16.74	8.170			
ROL – Time 1 & 4				-6.776	<.001	.68
Time 1	22	11.82	7.744			
Time 4	22	17.37	8.837			

Data in Table 33 report the ROL test scores outcome of the paired samples *t* tests for Group 1 teina students. Table 33 shows that the ROL test scores for Group 1 teina students on average were significantly higher at the later test time, than the earlier test time, for three of the six test intervals. Further analysis reveals the following statistically significant differences between these scores: (a) Time 1 & 2 $t(23)=-8.936, p<.001$, (b) Time 1 & 3 $t(22)=-11.612, p<.001$, and (c) Time 1 & 4 $t(21)=-6.776, p<.001$.

An effect size calculator (Watkins, 2003) was used to determine the standardized effect size (*d*) between the test scores for the earlier time (pre-treatment condition) and the later time (post-treatment condition) using the pooled standard deviation. Results were interpreted using Hedges *g* (Hedges & Olkin, 1985) to determine the strength of the difference between variables. The strength of these differences were typical to larger than typical for Time 1 & 2 ($d=.72$), Time 1 & 3 ($d=.58$), and Time 1 & 4 ($d=.68$) (Cohen, 1988; Morgan et al., 2006). These results reveal that the effect size of mean differences between the earlier and later test scores is

substantially more than the threshold level set by Fashola and Slavin (1998) ($d=.25$) for these three time intervals.

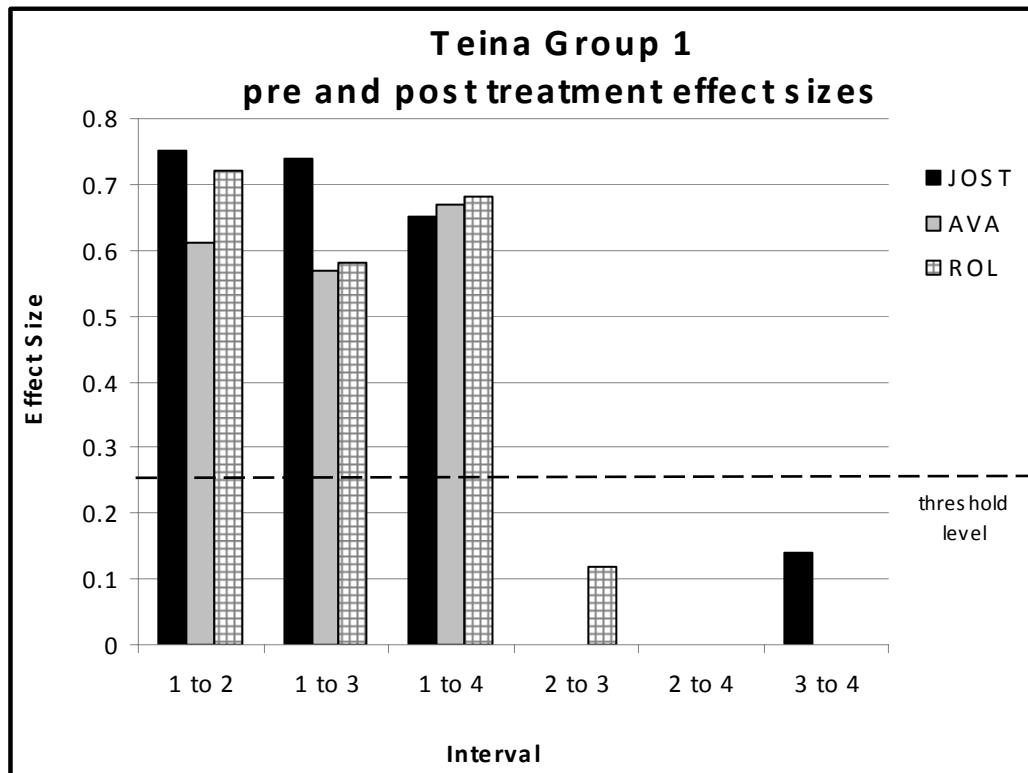


Figure 20: Effect size results for Group 1 Teina on three tests across six time intervals.

Figure 20 illustrates the effect size results for Group 1 teina on the three tests administered, JOST, AVA, and ROL, across six time intervals, Time 1 to 2, Time 1 to 3, Time 1 to 4, Time 2 to 3, Time 2 to 4, and Time 3 to 4. *The intervention for Group 1 teina took place between Time 1 and 2.* Figure 20 shows that largest effect size differences occurred for time intervals that included the time of testing before the intervention, time 1, and time after the intervention, times 2, 3 and 4. These results are consistent with the hypothesis that the intervention would contribute to significant oral language improvement for these students.

Group 2 Teina results

Group 2 of the teina students consisted of 24 total participants from four schools over two years. During the course of the study 3 participants left Group 2. The remaining 21 teina students from Group 2 received the tuakana led TALES intervention between the second and third time the three tests were administered.

Table 34

GROUP 2 TEINA STUDENTS
Paired Samples t Test comparing Group 2 teina students' average JOST test scores
over six time intervals

	n	M	SD	<i>t</i>	<i>p</i>	<i>d</i>
JOST – Time 1 & 2				-3.966	.001	.29
Time 1	24	32.17	11.930			
Time 2	24	35.67	12.111			
JOST – Time 1 & 3				-8.423	<.001	1.51
Time 1	21	32.33	11.599			
Time 3	21	46.62	6.103			
JOST – Time 1 & 4				-6.161	<.001	1.39
Time 1	23	31.48	11.700			
Time 4	23	44.30	5.295			
JOST – Time 2 & 3				-5.992	<.001	1.06
Time 2	21	36.00	12.470			
Time 3	21	46.62	6.103			
JOST – Time 2 & 4				-4.322	<.001	.94
Time 2	23	35.26	12.215			
Time 4	23	44.30	5.295			

Data in Table 34 report the JOST test scores outcome of the paired samples *t* tests for Group 2 students. Table 34 shows that the JOST test scores for Group 2 teina students on average were significantly higher at the later test time, than the earlier test time, for five of the six test intervals. Further analysis reveals the following statistically significant differences between these scores: (a) Time 1 & 2 $t(23) = -3.966, p < .001$, (b) Time 1 & 3 $t(20) = -8.423, p < .001$, (c) Time 1 & 4 $t(22) = -6.161, p < .001$, (d) Time 2 & 3 $t(20) = -5.992, p < .001$, and (e) Time 2 & 4 $t(22) = -4.322, p < .001$.

An effect size calculator (Watkins, 2003) was used to determine the standardized effect size (*d*) between the test scores for the earlier time (pre-treatment condition) and the later time (post-treatment condition) using the pooled standard deviation. Results were interpreted using Hedges *g* (Hedges & Olkin, 1985) to determine the strength of the difference between variables. The strength of these differences were much larger than typical for Time 1 & 3 ($d = 1.51$), Time 1 & 4 ($d = 1.39$), and Time 2 & 3 ($d = 1.06$); larger than typical, to much larger than typical, for Time 2

& 4 ($d=.94$), and smaller than typical, to typical, for Time 1 & 2 ($d=.29$) (Cohen, 1988; Morgan et al., 2006). These results reveal that the effect size of mean differences between the earlier and later test scores is substantially more than the threshold level set by Fashola and Slavin (1998) ($d=.25$) for three of the four time intervals.

Table 35

GROUP 2 TEINA STUDENTS
Paired Samples *t* Test comparing Group 2 teina students' average AVA test scores
over six time intervals

	N	M	SD	<i>t</i>	<i>p</i>	<i>d</i>
AVA – Time 1 & 2				-3.377	.003	.42
Time 1	24	11.17	4.565			
Time 2	24	13.08	4.432			
AVA – Time 1 & 3				-5.840	<.001	1.27
Time 1	21	11.62	4.410			
Time 3	21	16.48	2.943			
AVA – Time 1 & 4				-5.652	<.001	1.01
Time 1	23	11.04	4.627			
Time 4	23	15.43	3.847			
AVA – Time 2 & 3				-4.450	<.001	.80
Time 2	21	13.43	4.411			
Time 3	21	16.48	2.943			
AVA – Time 2 & 4				-3.887	.001	.58
Time 2	23	12.96	4.487			
Time 4	23	15.43	3.847			

Data in Table 35 report the AVA test scores outcome of the paired samples *t* tests for Group 2 teina students. Table 35 shows that the AVA test scores for Group 2 teina students on average were significantly higher at the later test time than the earlier test time, for five of the six test intervals. Further analysis reveals the following statistically significant differences between these scores: (a) Time 1 & 2 $t(23)=-3.377, p=.003$, (b) Time 1 & 3 $t(20)=-5.840, p<.001$, (c) Time 1 & 4 $t(22)=-5.652, p<.001$, (d) Time 2 & 3 $t(20)=-4.450, p<.001$, and (e) Time 2 & 4 $t(22)=-3.887, p=.001$.

An effect size calculator (Watkins, 2003) was used to determine the standardized effect size (*d*) between the test scores for the earlier time (pre-treatment condition)

and the later time (post-treatment condition) using the pooled standard deviation. Results were interpreted using Hedges *g* (Hedges & Olkin, 1985) to determine the strength of the difference between variables. The strength of these differences were much larger than typical for Time 1 & 3 ($d=1.27$), and Time 1 & 4 ($d=1.01$); larger than typical for Time 2 & 3 ($d=.80$); typical, to much larger than typical, for Time 2 & 4 ($d=.58$); and smaller than typical, to typical, for Time 1 & 2 ($d=.42$) (Cohen, 1988; Morgan et al., 2006). These results reveal that the effect size of mean differences between the earlier and later test scores is substantially more than the threshold level set by Fashola and Slavin (1998) ($d=.25$) for these five time intervals.

Table 36

GROUP 2 TEINA STUDENTS
Paired Samples *t* Test comparing Group 2 teina students' average ROL test scores
over six time intervals

	n	M	SD	<i>t</i>	<i>p</i>	<i>d</i>
ROL – Time 1 & 3				-9.388	<.001	.87
Time 1	21	12.67	7.303			
Time 3	21	18.95	6.801			
ROL – Time 1 & 4				-8.610	<.001	.75
Time 1	23	12.09	7.323			
Time 4	23	17.43	6.721			
ROL – Time 2 & 3				-11.251	<.001	.80
Time 2	21	13.43	6.750			
Time 3	21	18.95	6.801			
ROL – Time 2 & 4				-8.292	<.001	.70
Time 2	23	12.43	7.254			
Time 4	23	17.43	6.721			

Data in Table 36 report the ROL test scores outcome of the paired samples *t* tests for Group 2 teina students. Table 36 shows that the ROL test scores for Group 2 teina students on average were significantly higher at the later test time than the earlier test time, for four of the six test intervals. Further analysis reveals the following statistically significant differences between these scores: (a) Time 1 & 3 $t(20)=-9.338$, $p<.001$, (b) Time 1 & 4 $t(22)=-8.610$, $p<.001$, (c) Time 2 & 3 $t(20)=-11.251$, $p<.001$, and (d) Time 2 & 4 $t(22)=-8.292$, $p<.001$.

An effect size calculator (Watkins, 2003) was used to determine the standardized

effect size (d) between the test scores for the earlier time (control/comparison group) and the later time (experimental group) using the pooled standard deviation. Results were interpreted using Hedges g (Hedges & Olkin, 1985) to determine the strength of the difference between variables. The strength of these differences were larger than typical, to much larger than typical, for Time 1 & 3 ($d=.87$); larger than typical for Time 2 & 3 ($d=.80$); typical, to much larger than typical, for Time 1 & 4 ($d=.75$) and Time 2 & 4 ($d=.70$) (Cohen, 1988; Morgan et al., 2006). These results reveal that the effect size of mean differences between the earlier and later test scores is substantially more than the threshold level set by Fashola and Slavin (1998) ($d=.25$) for these four time intervals.

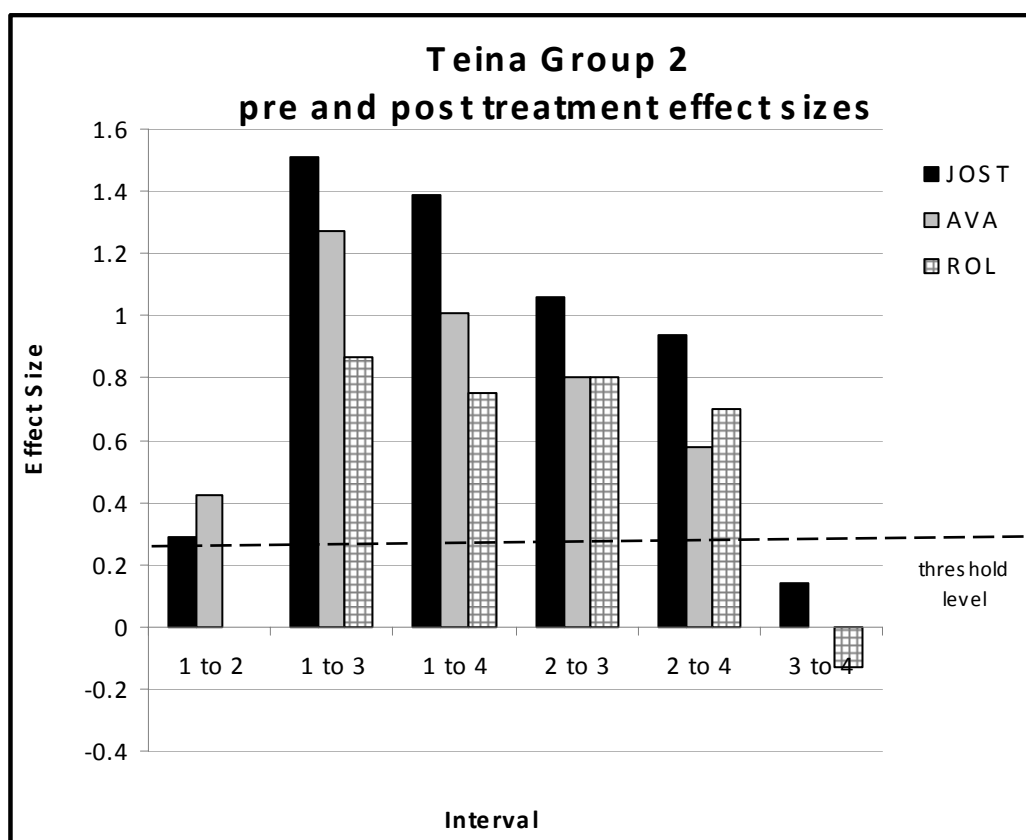


Figure 21: Effect size results for Group 2 Teina on three tests across six time intervals.

Figure 21 illustrates the effect size outcomes for Group 2 teina students on the three tests administered, JOST, AVA, and ROL, across six time intervals, Time 1 to 2, Time 1 to 3, Time 1 to 4, Time 2 to 3, Time 2 to 4, and Time 3 to 4. *The intervention for Group 2 teina took place between Time 2 and 3.* Figure 21 shows that largest effect size differences occurred for time intervals that included the time of testing before the intervention, Time 1 and 2, and time after the intervention, Times 3 and 4. These results are consistent with the hypothesis that

the intervention would contribute to significant oral language improvement for these students.

Group 3 Teina results

Group 3 of the teina students consisted of a total of 24 participants from four schools, over two years. During the course of the study three participants left Group 3. The remaining 21 students in Group 3 received the tuakana led TALES intervention, between the third and fourth time the three tests were administered.

Table 37

GROUP 3 TEINA STUDENTS
Paired Samples t Test comparing Group 3 teina students' average JOST test scores
over six time intervals

	n	M	SD	<i>t</i>	<i>p</i>	<i>d</i>
JOST – Time 1 & 2				-2.654	.014	.39
Time 1	24	36.79	7.929			
Time 2	24	39.50	5.413			
JOST – Time 1 & 3				-4.502	<.001	.75
Time 1	21	37.62	6.265			
Time 3	21	42.43	6.345			
JOST – Time 1 & 4				-10.846	<.001	2.11
Time 1	20	37.60	6.427			
Time 4	20	49.15	4.043			
JOST – Time 2 & 3				-3.033	.007	.45
Time 2	21	39.76	5.300			
Time 3	21	42.43	6.345			
JOST – Time 2 & 4				-11.050	<.001	1.99
Time 2	20	39.55	5.346			
Time 4	20	49.15	4.043			
JOST – Time 3 & 4				-6.308	<.001	1.29
Time 3	20	42.15	6.377			
Time 4	20	49.15	4.043			

Data in Table 37 report the outcome of the paired samples *t* tests for Group 3 teina students. Table 37 shows that the JOST test scores for Group 3 teina students on average were significantly higher at the later test time, than the earlier test time, for all six of the six test intervals. Further analysis reveals the following statistically significant differences between these scores: (a) Time 1 & 2 *t*(23)-

2.654, $p=.014$, (b) Time 1 & 3 $t(20)=-4.502$, $p<.001$, (c) Time 1 & 4 $t(19)=-10.846$, $p<.001$, (d) Time 2 & 3 $t(20)=-3.033$, $p=.007$, (e) Time 2 & 4 $t(19)=-11.050$ $p<.001$, and (f) Time 3 & 4 $t(19)=-6.308$, $p<.001$.

An effect size calculator (Watkins, 2003) was used to determine the standardized effect size (d) between the test scores for the earlier time (pre-treatment condition) and the later time (post-treatment condition) using the pooled standard deviation. Results were interpreted using Hedges g (Hedges & Olkin, 1985) to determine the strength of the difference between variables. The strength of these differences were much larger than typical for Time 1 & 4 ($d=2.11$), Time 2 & 4 ($d=1.99$), and Time 3 & 4 ($d=1.29$); typical, to larger than typical, for Time 1 & 3 ($d=.75$); and smaller than typical, to typical, for Time 1 & 2 ($d=.39$) and Time 2 & 3 ($d=.45$) (Cohen, 1988; Morgan et al., 2006). These results reveal that the effect size of mean differences between the earlier and later JOST test scores is substantially more than the threshold level set by Fashola and Slavin (1998) ($d=.25$) for six of the time intervals.

Table 38

GROUP 3 TEINA STUDENTS
Paired Samples t Test comparing Group 3 teina students' average AVA test scores
over six time intervals

	n	M	SD	t	p	d
AVA – Time 1 & 2				-2.897	.008	.46
Time 1	24	12.58	3.501			
Time 2	24	14.083	2.842			
AVA – Time 1 & 3				-4.177	<.001	.82
Time 1	21	12.67	3.215			
Time 3	21	15.24	2.965			
AVA – Time 1 & 4				-8.424	<.001	1.82
Time 1	20	12.60	3.283			
Time 4	20	18.15	2.681			
AVA – Time 2 & 4				-8.558	<.001	1.55
Time 2	20	14.20	2.285			
Time 4	20	18.15	2.681			
AVA – Time 3 & 4				-6.827	.001	1.01
Time 3	20	15.20	3.037			
Time 4	20	18.15	2.681			

Data in Table 38 report the AVA test scores outcome of the paired samples *t* tests for Group 3 teina students. Table 38 shows that the AVA test scores for Group 3 teina students in mainstream schools on average were significantly higher at the later test time than the earlier test time, for five of the six test intervals. Further analysis reveals the following statistically significant differences between these scores: (a) Time 1 & 2 $t(23)=-2.897, p=.008$, (b) Time 1 & 3 $t(20)=-4.177, p<.001$, (c) Time 1 & 4 $t(19)=-8.424, p<.001$, (d) Time 2 & 4 $t(19)=-8.558, p<.001$, and (e) Time 3 & 4 $t(19)=-6.827, p=.001$.

An effect size calculator (Watkins, 2003) was used to determine the standardized effect size (*d*) between the test scores for the earlier time (pre-treatment condition) and the later time (post-treatment condition) using the pooled standard deviation. Results were interpreted using Hedges *g* (Hedges & Olkin, 1985) to determine the strength of the difference between variables. The strength of these differences were much larger than typical for Time 1 & 4 ($d=1.82$), Time 2 & 4 ($d=1.55$), and Time 3 & 4 ($d=1.01$); larger than typical, to much larger than typical, for Time 1 & 3 ($d=.82$); and smaller than typical, to typical, for Time 1 & 2 ($d=.46$) (Cohen, 1988; Morgan et al., 2006). These results reveal that the effect size of mean differences between the earlier and later AVA test scores is substantially more than the threshold level set by Fashola and Slavin (1998) ($d=.25$) for these five time intervals.

Table 39

GROUP 3 TEINA STUDENTS
Paired Samples t Test comparing Group 3 teina students' average ROL test scores
over six time intervals

	N	M	SD	<i>t</i>	<i>p</i>	<i>d</i>
ROL – Time 1 & 2				-2.574	.017	.17
Time 1	24	16.17	8.009			
Time 2	24	17.46	7.163			
ROL – Time 1 & 3				-3.856	.001	.42
Time 1	21	15.90	6.877			
Time 3	21	18.76	6.625			
ROL – Time 1 & 4				-9.296	<.001	1.09
Time 1	20	15.75	7.018			
Time 4	20	23.80	7.424			
ROL – Time 2 & 3				-2.673	.015	.24
Time 2	21	17.19	6.470			
Time 3	21	18.76	6.625			
ROL – Time 2 & 4				-11.750	<.001	.98
Time 2	20	16.85	6.442			
Time 4	20	23.80	7.424			
ROL – Time 3 & 4				-8.267	<.001	.74
Time 3	20	18.50	6.685			
Time 4	20	23.80	7.424			

Data in Table 39 report the ROL test scores outcome of the paired samples *t* tests for Group 3 teina students. Table 39 shows that the ROL test scores for Group 3 teina students in mainstream schools on average were significantly higher at the later test time than the earlier test time, for all six of the six test intervals. Further analysis reveals the following statistically significant differences between these scores: (a) Time 1 & 2 $t(23)=-2.574, p=.017$, (b) Time 1 & 3 $t(20)=-3.856, p=.001$, (c) Time 1 & 4 $t(19)=-9.296, p<.001$, (d) Time 2 & 3 $t(20)=-2.673, p=.015$, (d) Time 2 & 4 $t(19)=-11.750, p<.001$, and (e) Time 3 & 4 $t(19)=-8.267, p<.001$.

An effect size calculator (Watkins, 2003) was used to determine the standardized effect size (*d*) between the test scores for the earlier time (pre-treatment condition) and the later time (post-treatment condition) using the pooled standard deviation. Results were interpreted using Hedges *g* (Hedges & Olkin, 1985) to determine the strength of the difference between variables. The strength of these differences

were much larger than typical for Time 1 & 4 ($d=1.09$); larger than typical, to much larger than typical, for Time 2 & 4 ($d=.98$); typical, to much larger than typical, for Time 3 & 4 ($d=.74$); smaller than typical to typical for Time 1 & 3 ($d=.42$) and for Time 2 & 3 ($d=.24$); and much smaller than typical, to smaller than typical, for Time 1 & 3 ($d=.17$) (Cohen, 1988; Morgan et al., 2006). These results reveal that the effect size of mean differences between the earlier and later ROL test scores is substantially more than the threshold level set by Fashola and Slavin (1998) ($d=.25$) for four of the six time intervals.

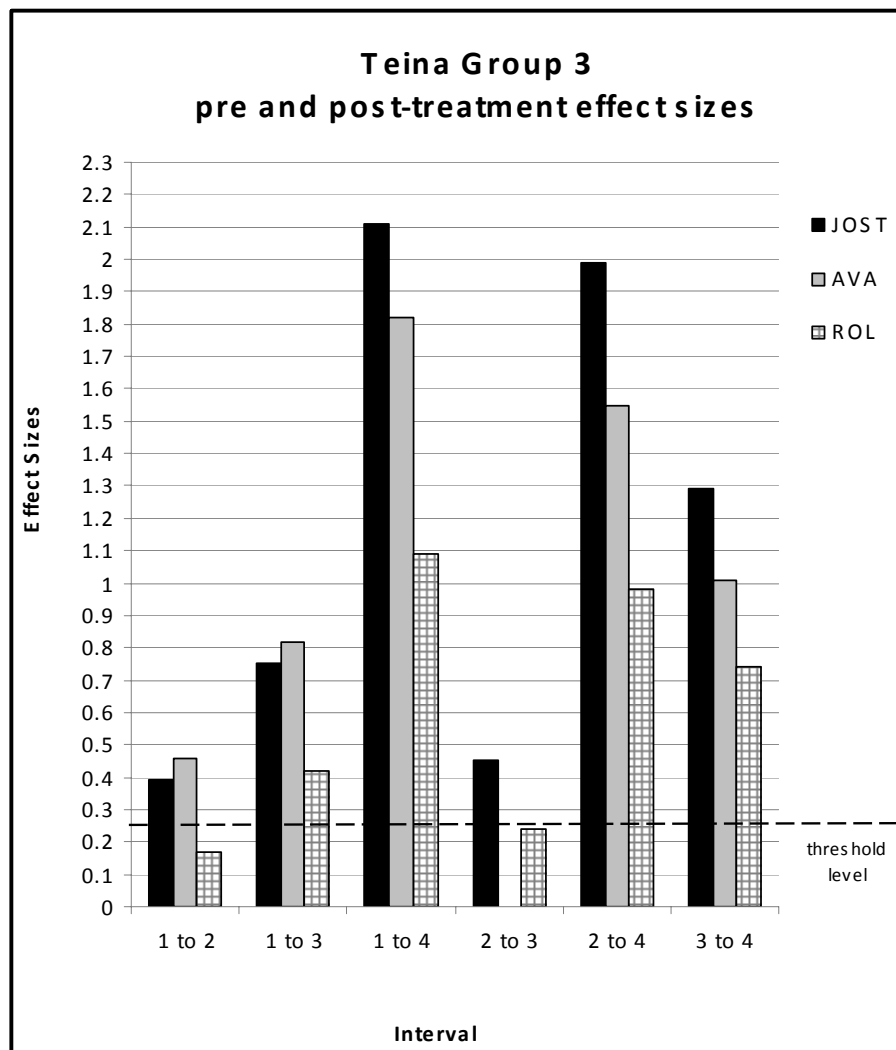


Figure 22: Effect size results for Group 3 Teina on three tests across six time intervals.

Figure 22 illustrates the effect size outcome for Group 3 teina students on the three tests administered, JOST, AVA, and ROL, across six time intervals, Time 1 to 2, Time 1 to 3, Time 1 to 4, Time 2 to 3, Time 2 to 4, and Time 3 to 4. *The intervention for Group 3 teina took place between Time 3 and 4.* Figure 22 shows that largest effect size differences occurred for time intervals that included the

time of testing before the intervention, Time 1, 2 and 3, and time after the intervention, Time 4. These results are consistent with the hypothesis that the intervention would contribute to significant oral language improvement for these students.

Effect size for three groups of teina

Table 40

Pre and post-treatment effect size for three groups of teina across three measures

Group	Assessment tool	1 - 4	1 - 2	2 - 3	3 - 4
Group 1 Pre N = 24 Post N = 22	JOST	.65	.75		
	AVA	.67	.61		
	ROL	.68	.72		
Group 2 Pre N = 24 Post N = 21	JOST	1.39		1.06	
	AVA	1.01		.80	
	ROL	.75		.80	
Group 3 Pre N = 24 Post N = 21	JOST	2.11			1.29
	AVA	1.82			1.01
	ROL	1.09			.74

Table 40 demonstrates the effect size calculated for each pair of means from 1 – 4 (pre and post) involvement in the programme, and the effect size calculated on each pair of means for each group when the intervention took place. According to Hattie (1999) .4 is the effect size benchmark that indicates whether an intervention is worth implementing within a school. The results demonstrated in Table 40: ‘Effect size for three groups of teina across three measures’, after a six week intervention, clearly surpass these expectations.

The quantitative oral language outcome data for all 72 teina demonstrate that involvement in the TALES procedure has resulted in a substantial improvement in the oral language of all of these students.

CHAPTER 5: DISCUSSION AND CONCLUSION

The central focus of this research study was to examine the claim that tuākana involved in implementing the TALEs procedure could make a substantial improvement in the oral language development of their teina through engaging with them in regular conversations. This claim was strongly supported by the findings of the study.

Number of TALEs sessions delivered

The estimated mean number of TALEs sessions which all 72 tuakana – teina pairs engaged in was 12.26, (sd 3.84) out of a potential 24 sessions. This was just half the number of sessions planned for, although the estimated mean number of TALEs sessions engaged in by the six randomly selected tuākana and teina was somewhat higher than this, (16/24 sessions). Nevertheless, while participating in only 12 to 16 TALEs sessions over six weeks, the level of improvement on oral language measures obtained by teina in this study, indicates that this programme had a powerful and substantial impact.

Quantitative oral language outcome data

In the sample selected randomly for closer analysis, descriptive data from within the tuakana – teina TALEs sessions demonstrated a highly significant increase in the number of words spoken from Week 1 to Week 6 by the six teina. Nearly three times as many words were being spoken by teina in Week 6 than in Week 1. The mean total talk of the six teina was 60.66 (sd 46.58), in Week 1, and 179.33 (sd 57.07) in Week 6. This increase in words spoken was evident as early as Week 2, and was typically maintained throughout the remaining four weeks of the intervention. The pairs would have had approximately 2.5 hours of conversation by the end of the second week. This is considerably more conversation than the amount typically reported as occurring between teachers and students in a busy classroom (Cazden, 1990; Clay, 1998). These data indicate that TALEs can serve as an effective vehicle for providing the sufficient quantity of conversations that Krashen (1987) suggests is necessary for optimal input of language acquisition to occur.

The significant and substantial raw score gains and effect size results reported in the statistical analysis of three of the quantitative measures (Record of Oral Language, Junior Oral Screening Tool, and Auditory-Vocal Association Assessment of Verbal Attainments) indicate that there were major oral language gains for all 72 teina students involved in the research study, and that these changes occurred most strongly during the phases in which teina had regular conversations with tuākana, in accord with the multiple baseline design. The multiple baseline design employed in this study helped to rule out other “Plausible Alternative Rival Explanations (PARE)” as described by Hattie and Hunt (2004) such as the students improving naturally due to maturation or exposure to the general school programme.

While it might be argued that because the outcome measures were repeated four times, the students may have become “test wise” (Hattie & Hunt, 2004) the effect sizes of mean differences for each of three student groups showed that the largest effect size differences occurred for time intervals that compared the time of testing *before* the intervention, with the time *after* the intervention.

Comparing pre and post test means, the effect sizes for the three groups of teina students on each of the three oral language measures clearly surpassed both the benchmark size of 0.25 set by Fashola and Slavin (1998) and the 0.40 benchmark recommended by Hattie (1999).

Qualitative information on tuākana conversational interactions with teina

While all groups had pairs that had at least one tape per week for six weeks, only two of 24 pairs from Group 3 met the criteria for inclusion in the random sample of six pairs. This was disappointingly low. However, the lower number of Group 3 pairs meeting this criterion might be attributed to interference from the large number of disruptions, such as cultural festivals and end of year productions, that occurred in the fourth term of the school year, which is when Group 3 teina engaged with their tuākana in the TALEs procedures .

Although there was a lower representation of students from Group 3, the TALEs procedures were fully implemented by all (72 tuākana-teina pairs) involved in the research study across four different schools. This provided a large enough sample to support a more general claim that Year 6 tuākana, working in similar school settings with Year 1 teina who experience difficulties with learning oral language, can successfully implement the TALEs procedures.

The detailed qualitative analysis of the stratified random sample of six of the 72 pairs illustrated both the effectiveness of the tuākana interaction with the teina, and the different ways that the tuākana were able to implement the TALEs procedure. The small sample size for this more detailed qualitative analysis was limited by the amount of time needed to carry out a complete analysis of weekly tuākana – teina interactions and feedback sessions, as well as feed-forward interactions, over the six week period.

Qualitative information on tuākana learning

Data on changes in the language of the six randomly selected tuākana across the six weeks of the programme, demonstrated that they effectively implemented the TALEs procedures and achieved the number one goal of having fun and getting their teina to talk more.

McNaughton (2002) recommends a high degree of versatility in learning activities designed to promote children's learning. There was a high degree of versatility for the six tuākana-teina pairs, in literacy learning activities, as evident from the analysis of the transcripts of the five minute probes. The unique learning needs and personal learning intentions of each tuākana and teina were successfully monitored using this five minute probe procedure.

The decrease in tuākana mean total talk standard deviations, from 177.61 to 75.86, encompasses some substantial changes for those tuākana who were at the extreme ends of the mean total talk continuum at Week 1. For example, the major decrease (from 600 to 220) in the number of words spoken by Tuākana 6 between Week 1 and Week 6 indicates her success in achieving the overall learning intention for her to develop turn taking and better active listening skills. At the other end of the

spectrum, the low number of words spoken in Week 1 by Tuakana 14 (96) supports the pre treatment teacher comment that Tuakana 14 was “uncommunicative with adults and peers and did not contribute to class or group discussions”. The major increase in the number of words spoken (from 96 to 427) by Tuakana 14 between Week 1 and Week 6 reflects her success in improving her communication skills and increasing her confidence.

Effectiveness of the five minute probes

Transcripts of five minute probes from the audio taped conversations, were found to be very effective for the research purpose of demonstrating treatment integrity. Transcripts also provided qualitative examples of tuākana interacting with teina when implementing the TALEs procedure. The five minute probes provided an evidential base from which formative assessment could be developed, in order to:

- Inform feedback and feed-forward sessions within which purposeful and relevant conversations between tuākana and key teachers took place;
- Allow exploration of the context embedded communication within which participants could actively negotiate meaning, as outlined as necessary by Cummins (2000);
- Foster and demonstrate understanding by the tuākana of the oral language tutoring tasks and underlying processes that they were involved in;
- Demonstrate treatment integrity;
- Foster self and peer assessment by tuākana, leading to self monitoring and self regulation during TALEs implementation;
- Assist the collaborative identification of learning intentions and success criteria by the students and key teachers;
- Establish whether success criteria were met, and allow constructive dialogue. If there was disagreement, more of the tape could be listened to - it didn't have to be restricted to a five minute sample;
- Demonstrate examples of teina understanding of the tasks and process;
- Provide key teachers with insight that they may not have been aware of, into the knowledge that the tuākana and teina students had. (Tuakana 14s knowledge of dinosaurs for example).

Data in this study on the use of five minute probes supports Hattie and Timperley's (2007, p. 19) claim that feedback has a major impact on learning, and that this has "major implications for the design of assessments". The findings support the usefulness of the five minute probes as an effective assessment tool, and feedback and feed-forward strategy, as part of the formative assessment process, when they were listened to during learning conversations between the tuākana and the key teachers. The five minute probes, together with the subsequent conversations between the tuākana and the key teachers in this study provided an effective process for the teachers to "seek and learn from feedback." This is in accord with Hattie and Timperley's (2007, p. 19) suggestion that assessment needs to provide feedback if it is to be of value to students and teachers.

Oral language learning tasks, and the processes underlying the tasks, were made explicit in the 'TALES Toolkit' and training. They were referred to and reflected on in the feedback and feed-forward sessions, and in the prompts provided on the tuākana checklist and summary sheets, they act as reminders. Analysis of tuākana discussions with key teachers generated examples of instances where checklists had helped foster tuākana self regulation and responsibility, as described as desirable by Hattie and Timperley (2007). The 'Any other comments' section of the tuakana checklist and summary sheet provided opportunity for the tuākana and/or key teachers to write feedback and/or feed-forward.

Glynn et al., (2006, p. 157) promote collaborative learning conversations between the students and teachers. Feedback and feed-forward are connected "to the student's own generated evidence" and include examples of other students' learning. It is interesting to note that the feedback processes within the TALES procedure incorporate the key elements of responsive feedback described in this more recent literature. The TALES procedure also provided a structure within which Hattie and Timperley's (2007) three key questions of "Where am I going?" (Feed up), "How am I going?" (Feedback), and, "Where to next?" (Feed-forward), could be answered.

Further positive outcomes

It was not unexpected that the tuākana and teina would have conversations outside of the programmed TALEs sessions. Indeed, these were encouraged by the key teachers and researcher in training and feedback sessions, in line with experience from an earlier study (Grant, 2002). Tuākana sometimes referred to these additional conversations; (or *opportunities* for conversations), in their feedback and feed-forward sessions. The five minute probes captured examples of pairs arranging to meet at play time, and/or lunch time. It seems likely that these additional conversations also contributed to the rapid and substantial increase in language spoken by the teina. The TALEs procedure provided the teina with “tools” to initiate further conversations outside of planned sessions, and therefore to access more language input, as promoted by Krashen (1987). It is also likely that the TALEs procedure fostered a sense of whanaungatanga (connectedness and belonging) and contributed to initiating a culture of care, as promoted by Cavanagh (2008), Glynn (2008), and Macfarlane (2007).

Key teachers in one school reported that the tuakana and teina students involved in ‘TALES’, were “much better at leading, in student led parent meetings” than peers who were not involved in the intervention. This is particularly important when considering that all students involved in ‘TALES’ were students who had been identified as requiring a great deal of extra support to improve their oral language.

One parent, at the party to mark the end of the research study, tearfully thanked the researcher for implementing the programme. She explained that she and her husband had separated prior to the programme being implemented. She described how her child (one of the 72 teina students) had “shut down”, refusing to talk to either of them. The mother spoke of the relief that she felt when her child started ‘TALES’ and began to come home excitedly talking about his tuakana. She reported that this seemed to open channels for other conversations at home.

The key teachers, who were junior class teachers themselves, commented positively about the insight they gained from listening to the five minute probes. They commented on how much they enjoyed the positive relationships that were

built when they were engaging with the tuākana during the feedback and feed-forward sessions.

The powerful reciprocal processes used during the tuākana and key teacher meetings, is reflected in some of the transcripts of conversations between the tuākana and the teina. When the tuākana shared the task of assessing their performance, using the tuakana checklist and summary sheet, their dialogue with the teina informed the teina about learning intentions, and the purpose and goals of the activity. This provided opportunity for reflection within a safe context. Power was shared and the principles of *ako* were evident when one tuakana asked his teina “Did I achieve my goal this week? Did I? Did I achieve my personal goal today?” Teina were expected to actively participate, and while there may have been instances when the tuākana disagreed with what the teina said, these occasions provided further opportunities for learning. This reciprocity was demonstrated in an example from a transcript from one tuākana and key teacher feedback and feed-forward session, in week 3. In this transcript the tuākana discuss the problem of what to do when the teina says “yes” (i.e. “yes” that all of the task criteria were met by the tuakana, even though the tuakana herself did not agree:

- 121 KeyTchr 3 *... Um, I like the way um, I think it was you [Tuakana 39], went and asked the person, I think [Researcher] made the comment on her tape too [Last weeks feedback session given to Key Teacher 3 to listen to], you actually went through your checklist and asked that person to um, [Teina 39] you know, was I doing this? Was I doing this? Was I doing*
- 126 Tuakana 39 *She keeps on saying yes all the time but if she keeps on saying I just put it as no because I don't think I really did it*
- 128 Tuakana 37 *You be honest.*
- 128 Tuakana 39 *Yeah*
- 128 KeyTchr3 *Being honest. Yeah. Good boy [Tuakana 37].*
- Okay so, yeah um, I just wondered if you look at your one there, um [Tuakana 38] can you um, think that's an honest reflection on your, your*
- 132 Tuakana 38 *He kept saying yes, but it wasn't*
- 133 Researcher *Oh okay.*
- 133 KeyTchr3 *So that's what we talked about with [Tuakana 39]. [Tuakana 39] can you explain again to [Tuakana 38] what*

- you did?*
- 135 Tuakana 39 *(Little laugh) Well,*
- 135 KeyTchr3 *You asked the question, she kept on saying yes*
- 136 Tuakana 39 *Yes, but I was being honest and I put it 'no'.*
- 137 KeyTchr3 *Yeah. So would that [putting a 'no'] help you?*
- 138 Tuakana 38 *Yeap.*

Research limitations and opportunities

The success of the TALES programme can be attributed largely to the degree of commitment from the key teachers and the researcher. There were high demands on them to adhere to the procedures and protocols of the methodology needed in order to meet the research requirements of this study. However, further investigations of the effectiveness of TALES will still need to collect data that can inform feedback and feed-forward, and maintain treatment integrity.

While key teachers reported that the programme was easy to implement, some of the wider number of teachers who were subsequently involved in the research study, may have had limited ownership of it. There were instances where tuākana and teina attendance at TALES sessions was perceived by some of these teachers as dependent on acceptable behavior. In some instances teina were not allowed to attend until their other work was completed, and in other instances tuākana were not allowed to attend because their teacher said they had “more important” work to do. Had the study involved fewer tuākana-teina pairs, more time could have been spent in ongoing professional dialogue with all of the teachers, as occurred with the key teachers. Such ongoing professional dialogue might have assisted them to appreciate on a deeper level the importance of the oral language learning that underpinned the surface features of playing and having fun.

Another common concern identified in these meetings was timetabling. This concern was also discussed in feedback and feed-forward sessions. Attempts were made to negotiate times that suited the majority of participants. The time that TALES occurred in classrooms varied across schools and groups. Some students did not want to miss a particular subject that others in the group didn't mind missing, or catching up on later. Timetabling issues were also identified as a

teacher concern. Key teachers endeavoured to negotiate times that suited other teachers whose students were involved in the programme. When the students came from more than one class, there were sometimes difficulties reaching a consensus. One solution might be to encourage teachers to modify their classroom programmes so that all students in the classrooms are engaged in conversation promoting activities that are linked to the TALEs procedure.

The approach which was taken by the researcher in this study, of utilising only the first five minutes of audio tape recordings for transcript purposes, may have limited the amount and the richness of information available. For example, the present analysis may have missed information on how effectively the tuākana performed the *farewell* components of the TALEs procedure as specified in the 'TALES toolkit'. However key teachers were not so constrained when they listened to the five minute probes of audio tapes for tuākana feedback and feed-forward sessions. They were able to fast forward and rewind as they chose. Most key teachers commented that they often listened for much longer than five minutes, as they became so engrossed in listening to the conversations taking place.

The effectiveness of some of the conversation props (play materials) used in this study needs to be explored further. Although not formally analysed, it appears that the most often selected conversation prop was the play dough. It would be interesting to explore in more depth which props were most popular, and whether patterns emerged regarding the quantity and quality of talk when props selected were compared. It would be interesting also to explore whether the introduction of picture books with no text, (or with only limited text), would facilitate more talk and a greater range of vocabulary.

Even though all the key teachers participating in this study were senior teachers whose schools provided them with 'release time', there were heavy demands made on their time. A smaller and more intensive study may have enabled more consistent and focused feedback and feed-forward opportunities for both teachers and tuākana. While several of the tuākana and key teacher feedback and feed-forward sessions were taped, and some sections of these were transcribed, the need to keep this research study to manageable proportions meant that analysis of

this information was limited. In a future study, it would be valuable to explore more deeply and systematically the interactions between the key teachers and tuākana, and to explore how incorporating listening to the five minute probes together, can inform decisions regarding individual learning intentions and success criteria. It would be worthwhile also to explore whether the key teachers engaged in more conversations with the tuākana and teina as a result of being involved in this process.

This study provides us with a wider lens from which to view literacy. The study highlights the vital foundation that oral language provides for further literacy development in writing and reading. Conversations are inherently reciprocal. Meaningful conversations (not just questions and answers) are critical i.e. children need to talk about objects and events that they are familiar with. They need to listen and to be listened to at a ‘deep’ level. The training, within which active listening is a significant component of the ‘TALES Toolkit’ provides a model to the tuākana (and teachers) of how to engage in and manage conversations themselves. It is interesting to note that this study supports the development in schools of a ‘dialogic culture’ which has become a focus for leadership training (Clarke, 2009). School leaders are receiving training to engage in meaningful conversations with the teachers in their schools. The TALES programme reflects the five underlying principles of ‘developing and sustaining a dialogic school culture’ based on the work of, amongst others, John MacBeath and Robin Alexander (Clarke, 2009):

Five Principles:

- ☞ Collective
We address experiences, tasks and challenges together rather than in isolation.
- ☞ Reciprocal
We listen to each other, share ideas and consider alternative view points.
- ☞ Supportive
We articulate ideas freely, without fear of embarrassment of what we say will be judged wrong or inappropriate in order to help each other to reach common understandings
- ☞ Cumulative
We build on each other’s ideas and we link them together into coherent lines of inquiry, discussion and argument
- ☞ Purposeful
We start our dialogue with a known goal in view and we try to hold to that goal throughout

(Clarke, 2009)

This study builds on socio-cultural ideas about the importance for literacy of cultural contexts and equitable relationships, and of providing more culturally responsive pedagogy. Teachers were able to provide opportunities for reciprocal learning imbued with the concept of 'Ako' between the tuākana and the teina, while experiencing the same opportunities in their conversations with the tuākana themselves.

One of the reasons the TALEs programme was so successful is that tuākana share more closely the lived experiences of the teina. They know each other's neighbourhood. They share an understanding of each others' stories thus providing many opportunities for the 'storying and restorying', the building on of knowledge essential to literacy learning as highlighted in the narrative pedagogy and socio-cultural literature (Bishop & Glynn, 1999; Rogoff, 1990). The tuākana, although not significantly, were sufficiently more skilled to provide the opportunities for extension and expansion of language.

It is important to remember that the criteria for tuākana selection was that they were identified as quiet/'shy', and/or demonstrated challenging behaviour, and/or experienced difficulties in reading and written language. Prior to involvement in the TALEs programme these students' were not demonstrating their ability to express their thoughts, needs, and wants clearly or appropriately. However, within a six week period these same tuākana have demonstrated that they are capable of making a significant difference to the learning outcomes for the teina they worked with. They 'stepped up' to the challenge and met the goal of getting their teina to 'talk more'. They experienced success in an educational setting. They learned about the importance of conversation to learning, and they learned how to engage in conversation with their peers and their teachers. The transcripts of the five minute probes within the formative assessment framework allow us a glimpse of the learning the tuākana experienced. However it is difficult to adequately capture the lifting of spirit, the growth of mana, the standing tall and proud, the spark of enthusiasm ignited in their eyes, the confidence that being engaged in a purposeful and meaningful educational activity within which they shared power fostered.

Improving learning outcomes for Māori students

90% percent of the 72 tuākana, and 83% of the 72 teina in this research study were Māori students. The substantial success of all these students when engaged in learning opportunities that are reciprocal and interactive, and embody the principles of *ako* and whakawhanaungatanga, strongly support the effectiveness of pedagogies that are culturally responsive (Bishop & Glynn, 1999; Glynn et al., 2006; Ladson-Billings, 1995, 2006).

The results of this research study give a clear message to mainstream non-Māori teachers. Non-Maori teachers *can* make a positive and substantial difference to the learning outcomes of their Māori students. This is likely to occur when they provide Māori students with opportunities to learn within contexts that embody the principle of *ako*, (by promoting reciprocal learning) between tuākana and teina, and between students and teacher. It is clear that these contexts, together with the resulting positive relationships they engender, constitute an important element of effective oral language learning for students with limited language achievement.

Through the use of the TALEs procedures, together with the five minute probes of audio taped conversations, the teachers in this study (all non-Maori) were provided with opportunities to create an oral language learning environment within which they could build positive relationships with students, and learn much more about them. Similarly students could build on what knowledge and experiences they bring with them to school. This is a key aspect of the principles of *ako* identified by the Ministry of Education (2008a) in the summary of *Ka Hikitia – Managing for Success*, as “key to realizing Maori potential”. The processes followed in implementing the TALEs procedure in this study demonstrated the productive partnerships which developed between students, and between students and the key teachers and the researcher.

Conclusion

The emphasis on reciprocal conversations within a context of tuakana - teina interactive play in this research study does not imply that reading and writing are not also important contributors to the development of oral language. Nor is it suggested that students should not be taught reading and writing unless and until they have reached some particular milestone in oral language development. What this research study *does* demonstrate, however, is the power inherent in teacher planning providing opportunities for students to engage regularly in meaningful and interesting conversations with peers who are just a little more competent than they are. Language interactions that comprise mainly teacher directed questions and comments requiring “correct” or “appropriate” responses from students do not constitute effective conversations. The TALEs procedures in this research study provided regular opportunities for effective conversations. The use of peer tutoring and formative assessment that embodied the principles of *ako* enabled 72 tuakana students to make a significant and substantial improvement to the oral language of the 72 Year 1 teina students. The TALEs procedures allowed students freedom to speak, unconstrained by the structure and direction specified by an adult, and their oral language flourished.

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TALK includes:

- Greeting them politely
- Talking lots and lots about things you think might be interesting to them
- Making lots and lots of comments about what you are both doing as you are doing it
- Using manners talk like "Please", "Thank you", "You're welcome" etc
- PAUSING and giving them the opportunity to respond
- Remember to 'TALK, TALK, TALK, ASK, LISTEN'



LISTEN includes:

- Listen to them when they are talking to you
- Look interested
- Smile and be encouraging
- Make sounds that show you are listening like "uh huh", "mm", "okay", "yeah" etc
- Repeat what they say and add a little to it
- Make sure your 'body language' shows you are listening (looking at them, nodding/shaking head etc)
- If they don't want to talk...don't try to make them. Just keep talking about what you are doing, continue to be friendly and comment about what they are doing



SAY includes:

- Say their name throughout the session
- Say goodbye at the end of the session
- Remember to use their name when you say goodbye
- Let them know by the way you say goodbye that you really liked being with them, and are looking forward to seeing them again



T.A.L.E.S

ASK includes:

- Asking what they want to do or play with
- Remembering to only ask a question if you have spent a lot of time talking together, and you know they can answer
- If they don't seem to like it when you ask questions...don't
- If they do seem okay with questions you might ask questions about what they are doing, have done, like doing etc
- If they do answer your questions ask them questions that encourage them to talk more (what, where, why, how, when)
- If they don't seem to understand something you say ask them to signal or tell you that they don't understand
- Check for understanding e.g., Do you understand?



ENCOURAGE includes

- Encourage them to 'talk more'
- If they are happy talking and comfortable asking questions use: What, where, how, why and when questions
- Talking in a friendly and relaxed way even if they don't want to talk or answer questions
- Make lots of positive comments about what they are doing, or something that you have noticed or heard about them (might have run a fast race, or look like they have got something new etc)



Research Timetable: Sarah Grant

	January	February	March	April	May	June	July	August	September	October	November	December
STAGE 1 2004	◀ Initial Thesis Proposal, and, Enrolment ▶ ▶ Prepare the research plan → <i>Review Research Plan</i> ▶ Draft Literature Review Chapter → ▶ Draft Methodology Chapter → Negotiate schools involvement 2005/2006 ▶ Ethics Approval? ? ▶ ▶ Gather Information * → (E.g., Teacher Interviews; Policies) * Amended to Feb 2005											
STAGE 2 2005	◀ Analyse information ▶ Hold Parent consultation meetings ▶ Develop Action plans with teachers <i>Review Research Plan</i> <i>Review Literature Review and Methodology Chapters</i> ▶ Implement Intervention → ▶ Gather student baseline data x2 x3 (E.g., oral language assessments; narrative interviews) Gather student comparison data and other information → Negotiate/confirm schools involvement Provide feedback to schools and parents Gather Information *											
STAGE 3 2006	◀ Analyse information ▶ Hold Parent consultation meetings ▶ Refine the Intervention & Develop Action plans with teachers <i>Review Research Plan</i> <i>Review Literature Review and Methodology Chapters</i> ▶ Implement refined Intervention → ▶ Gather student baseline data x2 x3 (E.g., oral language assessments; narrative interviews) Gather student comparison data and other information → (Final Teacher Interviews; Policies) Provide feedback to schools and parents <i>Review Research Plan</i>											
2007-2008	◀ Analyse information ▶ ▶ Results Chapter → ▶ Discussion Chapter → REVIEW ALL CHAPTERS COMPLETION[FEB 28 2009]											

INFORMATION SHEET FOR POTENTIAL RESEARCH PARTICIPANTS

Thank you for taking the time to consider volunteering to become a collaborative participant in the research that I am undertaking as a requirement for the Doctor of Philosophy Thesis that I am completing through the University of Waikato. There are a number of requirements necessary to involvement that participants and student participants' parents/caregivers need to consider before agreeing to participation in the research.

WHAT IS THE PURPOSE OF THE RESEARCH?

To demonstrate that mainstream teachers are able to provide a culturally responsive and inclusive intervention that will improve the effectiveness of oral language programmes for Māori students in junior classrooms while developing the leadership potential of Year 6 students through acknowledgement and promotion of te taha Māori.

Please note that while the focus of this study is on improving the educational outcomes for Māori students using culturally appropriate teaching approaches, the underlying philosophy is inclusive and it will be possible for all students in the classrooms to be invited to participate regardless of ethnicity.

WHY IS THE RESEARCH NEEDED?

- Māori students make up 60% of the student population in the Gisborne region and are disproportionately represented in national statistics for educational 'failure'.
- Historically Māori have had a strong oral tradition yet this is not reflected in national assessment results (Ministry of Education, 2001).
- There is a substantial body of research that clearly demonstrates the relationship between talk, academic acquisition, and achievement.
- While it is apparent that oral language is a key to further acquisition of literacy skills, the vast majority of literacy research and theory in the primary education field in New Zealand tends to focus on the acquisition of reading and writing skills.
- National and international research literature demonstrates that culturally responsive inclusive teaching approaches improve the educational outcomes of students.
- While there has been a call for non-Māori educators to provide culturally responsive inclusive contexts for learning, currently there appear to be very few inclusive culturally responsive oral language programmes available to teachers.

HOW? WHAT METHODS WILL BE USED?

Kaupapa Māori Research Methodology

There are a number of aspects of Kaupapa Māori Research Methodology (Bishop and Glynn, 1999) that are relevant to this research. Kaupapa Māori Research Methodology endeavours to create a power sharing process so that the relationship between the researcher and research participants is reciprocal and reflects the Māori concept of Ako. Rather than the researcher being in control and possibly imposing a biased interpretation in the analysis of the data, the understandings developed throughout the process are co-constructed through 'mutual storying', and the benefits of the process are shared.

Narrative Pedagogy

Kaupapa Māori Research Methodology promotes 'narrative' approaches to teaching as a way to create power-sharing relationships in classrooms. The notion that individuals lead 'storied lives' that they bring to relationships and that learning occurs through the process of storying and re-storying is the basis of narrative teaching approaches. Learning is seen as the outcome of interactions. In the classroom the approach promotes co-construction of curriculum content through negotiation between students and their teachers. Teachers and students have focused **conversations**. It is an inclusive teaching and learning strategy that is designed to encourage the participation of all students irrespective of cultural or academic and social diversity (Bishop, Berryman, Tiakiwai, & Richardson, 2003).

Collaborative Storying

One of the Kaupapa Māori Research Methodology tools used to address potential researcher imposition is through using a collaborative storying spiral discourse approach to interviews (Bishop, Berryman, Tiakiwai, & Richardson, 2003). The interviews may be with individual research participants or groups of research participants. The interviews are semi-structured, in-depth, and are intended to promote focussed **conversations** rather than the traditional question and answer interview format. Interviews are taped and transcribed by the researcher. Rather than the

researcher predetermining the topics, the agenda of these interviews is negotiated with the research participants. The participants are asked to check the transcript and 'revisit' the topics discussed with the researcher. The researcher writes a draft narrative that is intended to capture the essence of the views and opinions shared during the 'conversation'. The participants are then asked to check that the draft narrative accurately represents the co-constructed understandings demonstrated in the interview. The transcripts and narratives are used as a basis for reflection and the co-construction of further shared understandings in the following interview. Within the collaborative storying process the researcher is considered the teina (junior) and the research participant the tuakana (senior).

Tuakana –Teina Peer Tutoring

Kaupapa Māori Research Methodology promotes the use of "collaborative learning partnerships which respond to the specific cultural needs and interests of the learner" (Bishop, Berryman, Tiakiwai, & Richardson, 2003: 21). Peer tutoring is a form of non-competitive collaborative learning, and is considered a validated inclusive teaching strategy. Peer tutoring has many similarities to the Māori concept of tuakana – teina described by Tangaere (Tangaere, 1997) as a traditional method of teaching and learning. Peer tutoring has been identified as a teaching approach preferred by Māori (Macfarlane, 2004). National and international literature demonstrates that children's oral language develops through talking in meaningful conversations. The tuakana will be trained in a procedure that will promote focussed **conversations** between the tuakana and the teina. The reciprocal learning embedded within the tuakana - teina peer tutoring approach reflects the culturally responsive and inclusive Kaupapa Māori research methodology described by Bishop and Glynn (1999) that will be used throughout this research process.

Kōrerorero – (Chat, Conversation)

It seems appropriate that conversations play a significant role in the methodological approach to research focused on the development of oral language.

WHO WILL BE INVOLVED?

- Sixteen classes of students and their teachers from Year 0, Year 1, Year 2, and, Year 6 classes, in three schools, will be invited to participate. Junior and senior classes will be paired up.
- Parents /Caregivers of all participating students will be invited to participate throughout the course of the study, and particularly in the implementation of the programme phase. Parents will be encouraged to attend, and assist, with the training of the tuakana groups.

WHERE?

The research will be conducted in the regular setting of the school.

WHEN?

- Involvement in the study will be for a two-year period. However the participants' main involvement will be for one year, either 2005 or 2006.
- It is envisaged that the implementation phase will be for two terms, approximately between eighteen and twenty weeks, for each pair of classrooms involved in the study. In addition to the time spent implementing the programme as part of the teacher's regular classroom timetable it is estimated that within the two years of the study the teacher will be required to commit approximately 19 hours to the research over and above the regular teaching workload.
- It is envisaged that individual student participant involvement in the research and programme will mainly occur during a period of approximately six weeks when the programme is implemented for approximately ½ an hour daily.

WHAT ELSE IS INVOLVED?

- Regular classroom data will be collected on all students participating in the study for two years at approximately six monthly intervals. During the implementation phase of the tuakana – teina oral language programme further data will be collected using a multiple baseline approach.
- Although some of the quantitative data collected using the multiple baseline approach will entail approximately ½ an hour per phase for individual teina, the majority of assessments will be gathered as part of the regular classroom assessment practice, or, non-intrusive data collection such as anecdotal observations and tape recordings.
- The tuakana will be trained to use a tape recorder and the pairs will be taped on a rotation basis. One tuakana – teina pair from each group will be randomly selected for detailed analysis of taped sessions.

- The tuakana will be expected to complete a summary sheet/ tuakana checklist at the end of each tuakana – teina session (example attached).
- Each week the tuakana and their teacher will take part in a session that will be designed to reflect the narrative pedagogy described by Bishop and Glynn (Bishop & Glynn, 1999). Three of these group sessions will be ‘collaborative storying’ group interviews that will be taped and transcribed by the researcher.
- The teacher will also be required to take part in a series of sequential, semi-structured “interviews as conversations” with the researcher, such as those described by Bishop and Glynn (1999). It is envisaged that there will be pre intervention, mid intervention, and post intervention interviews.
- The teacher will be required to work collaboratively with the researcher and another teacher in the school (forming a junior school – senior school partnership) throughout the study.

In collaboration with the researcher and teacher peer the teacher will be required to:

- Co-construct a Tuakana – Teina Peer Tutoring Action Plan that will describe the intervention and guide the implementation of the programme within the teacher’s classroom
- Co-plan topic of interest studies with the tuakana as it is anticipated that shared ‘topics of interest’ studies will be used as starting points for conversations.
- Identify and select the students to be involved in the study
- Match the tuakana (tutors) and teina (tutees) considering both academic and social needs
- Randomly select three pairs for detailed data analysis
- Record pertinent anecdotal observations the teacher makes throughout the course of the study
- Assist with the collection of student achievement baseline and comparison data (e.g., JOST; ROL) throughout the course of the study as negotiated within the collaborative process
- Provide the researcher with results of academic data that the teacher usually gathers as part of the normal classroom programme e.g., running records, and, writing samples
- Provide opportunities for the programme to occur for 30 minutes per day, every day, for no less than eighteen weeks
- Share responsibility for planning, implementing and monitoring the programme as negotiated within the collaborative action plan

CONCLUSION

While involvement in the research study will make extra demands on participants it is anticipated that there will be reciprocal benefits for those involved. An initial smaller scale study demonstrated the effectiveness of the peer tutoring approach to oral language, and, relationship development (Grant, 2002). This study endeavours to refine the procedures used and build on those findings. It is also envisaged that involvement in this research will assist participating schools to meet the governments amended National Administration Guideline NAG 1 (V). NAG 1 (v), as amended by notice published in the New Zealand Gazette 25 November 1999, provides that:

Each board, through the principal and staff is required, in consultation with the school’s Māori community, to make known to the school’s community policies, plans and targets for improving the achievement of Māori students.

Thank you for taking the time to consider your participation in this research. Please do not hesitate to contact me if you would like further clarification. I look forward to talking with you again soon.

Yours sincerely

Sarah Grant

35 Russell Street
GISBORNE
Phone: 06 867 5706

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Sarah Grant
RTL
35 Russell Street
GISBORNE

Ph: (06) 867 5706

[Date]

Dear Parents/Caregivers.

As part of the schools' language programme we have been developing a Tuakana – Teina Peer Tutoring Programme in Oral Language. We would like _____[name] to take part in the programme as a _____[tuakana (tutor)/teina (tutee)].

This Tuakana – Teina Peer Tutoring Programme has been created as a way of encouraging children to talk more. Research has shown that training children to work together can help their academic and social learning. However, because this is a new programme it is important to continue to research how effective it is.

We invite you to a meeting to be held at [the school] on [date] at [time] so that we can talk with you about the programme and the research.

Afternoon tea will be provided.

We look forward to seeing you there.

Yours truly,

Sarah Grant
Researcher
[Teachers' names]

Please return the slip below

I am able unable to come to the Peer Tutoring in Oral Language meeting to discuss _____ being involved in the programme at the time provided.

I would like to meet with you on: Date: __/__/__ at: _____ (time).

Name: _____ Signature: _____

BOARD OF TRUSTEE CONSENT FORM

The Board of Trustees of _____ **[Name of school]** _____ agree to Sarah Grant undertaking research in **[Name of school]** as part of the Doctor of Philosophy Thesis she is completing through the University of Waikato.

The Board of Trustees has read the 'Information Sheet for Potential Research Participants' and 'Timetable of Teacher Involvement'.

The Board of Trustees understands that:

- The research is looking at the effectiveness of a Tuakana – Teina Peer tutoring programme in oral language.
- Teachers from the school will be involved in data collection, training of tuākana (tutors), and, the day to day implementation and monitoring of the programme.
- The principal and teachers involved in this study from this school will have access to the data collected pertaining to the students in this school throughout the programme and agree to protect the privacy of the student participants.
- The teacher's and researchers conversations in interviews will be tape-recorded and transcribed by the researcher, and, analysed by the researcher and the teacher. The teacher's privacy will be protected.
- The tuākana (tutors) will be trained to tape record the conversations they have with the teina (tutees). The tape recordings of the student's conversations may be analysed by the tuākana, the teacher and the researcher.
- The privacy of the school and the school's participants will be protected. The information pertaining about this school will only be shared with the thesis supervisors. The school will not be named in the reported research findings.
- The information will not be shared across schools.
- Unnamed data and information gained from the research for the thesis may be used in the preparation of papers for presentation or publication in the future.
- As required by the University of Waikato Human Research Ethics Regulations all data used for the published research will be archived indefinitely and made available for secondary analysis.
- The Board of Trustees has the option of allowing this school to be acknowledged in the acknowledgement section of the thesis and any future presentations and publications. This acknowledgement will not link this

BOARD OF TRUSTEE CONSENT FORM

school to data or information pertaining to this school in the reported research findings.

- The Board of Trustees has the right to withdraw this school from the research. If the Board of Trustees withdraws this school within the first three weeks of intervention no data pertaining to this school will be used in the study. After three weeks the Board of Trustees may still withdraw this school but the researcher has the right to use/report on the data generated from this schools involvement up to the time of withdrawal.
- If the Board of Trustees withdraws this school from the research no further information pertaining to this school will be collected for the research database from the time of withdrawal.
- If the Board of Trustees have any concerns or questions at any time they can contact Sarah Grant by phone (06) 867 5706 or by arranging a meeting time with Sarah. I am also able to contact the research supervisors Professor Ted Glynn (Ph: 07 838 4518), and/or, Doctor John Medcalf (Ph: 06 876 7871), C/- the University of Waikato, School of Education, Private Bag 3105, Hamilton.

The Board of Trustees would like the school, to be acknowledged in the acknowledgement section of the thesis, and any future presentations and publications. Yes No

Name: _____

Designated Board of Trustees Signatory:_____

Date: ____/____/____

PRINCIPAL CONSENT FORM

I [Principal's full name] agree Sarah Grant undertaking research in [Name of school] as part of the Doctor of Philosophy Thesis she is completing through the University of Waikato.

I have read the 'Information Sheet for Potential Research Participants' and 'Timetable of Teacher Involvement'.

I understand that:

- The research is looking at the effectiveness of a Tuakana – Teina Peer tutoring programme in oral language.
- Teachers from the school will be involved in data collection, training of tuākana (tutors), and, the day to day implementation and monitoring of the programme.
- Teachers from this school will have access to the data collected pertaining to the students in this school throughout the programme and agree to protect the privacy of the student participants.
- The teacher's and researchers conversations in interviews will be tape-recorded and transcribed by the researcher, and, analysed by the researcher and the teacher. The teacher's privacy will be protected.
- The tuākana (tutors) will be trained to tape record the conversations they have with the teina (tutees). The tape recordings of the student's conversations may be analysed by the tuākana, the teacher and the researcher.
- I will have access to any information pertaining to the students in this school throughout the programme and agree to protect the privacy of the student participants.
- The privacy of participants will be protected. The information pertaining to this school will only be shared with the thesis supervisors. The school will not be named in the reported research findings.
- The information will not be shared across schools.
- Unnamed data and information gained from the research for the thesis may be used in the preparation of papers for presentation or publication in the future.
- As required by the University of Waikato Human Research Ethics Regulations all data used for the published research will be archived indefinitely and made available for secondary analysis.

PRINCIPAL CONSENT FORM

- I have the option of allowing this school to be acknowledged in the acknowledgement section of the thesis and any future presentations and publications. This acknowledgement will not link this school to data or information pertaining to this school in the reported research findings.
- I have the right to withdraw this school from the research. If I withdraw this school within the first three weeks of intervention no data pertaining to this school will be used in the study. After three weeks I may still withdraw this school but the researcher has the right to use/report on the data generated from this schools involvement up to the time of withdrawal.
- If I withdraw this school from the research no further information pertaining to this school will be collected for the research database from the time of withdrawal.
- If I have any concerns or questions at any time I can contact Sarah Grant by phone (06) 867 5706 or by arranging a meeting time with Sarah. I am also able to contact the research supervisors Professor Ted Glynn (Ph: 07 838 4518), and/or, Doctor John Medcalf (Ph: 06 876 7871), C/- the University of Waikato, School of Education, Private Bag 3105, Hamilton.

I would like myself and the school to be acknowledged in the acknowledgement section of the thesis, and any future presentations and publications.

Yes No

Name: _____

Signed: _____

Date: ____/____/____

TEACHER CONSENT FORM

I [Teacher's full name] agree to be involved in the research undertaken by Sarah Grant as part of the Doctor of Philosophy Thesis she is completing through the University of Waikato.

I have read the 'Information Sheet for Potential Research Participants' and 'Timetable of Teacher Involvement'.

I understand that:

- The research is looking at the effectiveness of a Tuakana – Teina Peer tutoring programme in oral language.
- I will be involved in data collection, training of tuākana (tutors), and, the day to day implementation and monitoring of the programme.
- I will have access to the data collected pertaining to the students in this school throughout the programme and agree to protect the privacy of the student participants.
- The principal will have access to the data collected pertaining to the students in this school throughout the programme and agrees to protect the privacy of the student participants.
- My conversations with the researcher in interviews will be tape-recorded and transcribed by the researcher, and, analysed by the researcher and myself. My privacy as a participant will be protected.
- The tuākana (tutors) will be trained to tape record the conversations they have with the teina (tutees). The tape recordings of the student's conversations may be analysed by the tuākana, the researcher, and, myself.
- I will have access to any information pertaining to me throughout the programme.
- My privacy as a participant will be protected. The information pertaining to me will only be shared with the thesis supervisors. I will not be named in the reported research findings.
- I may choose to be named in the acknowledgement section of the thesis and any future presentations and publications. This will not link me to specific data or information pertaining to me in the reported research findings.
- The information will not be shared across schools.
- Unnamed data and information gained from the research for the thesis may be used in the preparation of papers for presentation or publication in the future.

TEACHER CONSENT FORM

- As required by the University of Waikato Human Research Ethics Regulations all data used for the published research will be archived indefinitely and made available for secondary analysis.
- I have the right to withdraw from the research. If I withdraw within the first three weeks of intervention no data pertaining to me will be used in the study. After three weeks I may still withdraw but the researcher has the right to use/report on the data generated from my involvement up to the time of withdrawal.
- I will be asked to nominate another staff member who I trust to take the role of 'go between'. The nominated person will be asked to let the researcher know if involvement in the research is causing me undue stress, and, to tell the researcher if I wish to withdraw from the research.
- If I withdraw from the research no further information pertaining to me will be collected for the research database from the time of withdrawal.
- If I have any concerns or questions at any time I can contact Sarah Grant by phone (06) 867 5706 or by arranging a meeting time with Sarah. I am also able to contact the research supervisors Professor Ted Glynn (Ph: 07 838 4518), and/or, Doctor John Medcalf (Ph: 06 876 7871), C/- the University of Waikato, School of Education, Private Bag 3105, Hamilton.

I would like to be acknowledged in the acknowledgement section of the thesis, and any future presentations and publications. Yes No

Name: _____

Signed: _____

Date: ____/____/____

PARENT/CAREGIVER CONSENT FORM

I give my permission for: _____ to be involved in the research undertaken by Sarah Grant as part of the Doctor of Philosophy Thesis she is completing through the University of Waikato.

I have read the 'Information Sheet for Potential Research Participants' and 'Timetable of Teacher Involvement'.

I understand that:

- The research is looking at the effectiveness of a Tuakana – Teina Peer tutoring programme in oral language.
- Teachers from the school will be involved in data collection, training of tuakana (tutors), and, the day to day implementation, monitoring, and analysis of the programme.
- The tuākana (tutors) will be trained to tape record the conversations they have with the teina (tutees). The tape recordings of my child's conversations may be analysed by the tuākana, the teacher and the researcher.
- I will have access to any information pertaining to my child throughout the programme.
- The privacy of my child will be protected. The information pertaining to my child will only be shared with the principal and teachers involved in the programme in this school, and, the thesis supervisors. My child will not be named when data pertaining to my child is reported on in the final thesis or in any overviews of the programme.
- In the interests of providing recognition for their contribution and involvement I may choose for my child to be named in the acknowledgement section of the thesis and any future presentations and publications. This will not link my child to specific data or information pertaining to them in the reported research findings.
- The information will not be shared across schools.
- Unnamed data and information gained from the research for the thesis may be used in the preparation of papers for presentation or publication in the future.
- As required by the University of Waikato Human Research Ethics Regulations all data used for the published research will be archived indefinitely and made available for secondary analysis.

PARENT/CAREGIVER CONSENT FORM

- I have the right to withdraw my child from the research. If I withdraw my child within the first three weeks of intervention no data pertaining to them will be used in the study. After three weeks I may still withdraw my child but the researcher has the right to use/report on the data generated from my child's involvement up to the time of withdrawal.
- My child has the right to withdraw from the research. If my child withdraws within the first three weeks of intervention no data pertaining to them will be used in the study. After three weeks my child may still withdraw but the researcher has the right to use/report on the data generated from my child's involvement up to the time of withdrawal.
- If my child is withdrawn from the research no further information pertaining to my child will be collected for the research database from the time of withdrawal.
- If I have any concerns or questions at any time I can contact Sarah Grant by phone (06) 867 5706 or by arranging a meeting time with Sarah. I am also able to contact the research supervisors Professor Ted Glynn (Ph: 07 838 4518), and/or, Doctor John Medcalf (Ph: 06 876 7871), C/- the University of Waikato, School of Education, Private Bag 3105, Hamilton.

I would like my child to be acknowledged in the acknowledgement section of the thesis and any future presentations and publications. Yes No

Name: _____

Signed: _____

Date: ____/____/____

TUAKANA CONSENT FORM

I [Name of Tuakana] agree to be involved in the research undertaken by Sarah Grant as part of the Doctor of Philosophy Thesis she is completing through the University of Waikato.

I understand that:

- The research is looking at how well a Tuakana – Teina Peer tutoring programme in oral language works.
- I will be trained to tape-record my conversations with the teina.
- Sarah will listen to tape recordings of my conversations with the teina and take notes about what the teina and I say.
- Sarah, my teacher, and I will sometimes talk about the tape-recorded conversations.
- I can ask Sarah for any information collected about me throughout the programme.
- The information about me will only be shared with Sarah's thesis supervisors, the principal and the teachers involved in the research at my school. My privacy will be protected. Sarah will not name me when she writes up the information about me in the thesis.
- I can choose to have my name included in the acknowledgement section of the thesis so that people will know that I have helped Sarah with the research, but they will not know what information in the research is about me.
- The information about me will not be shared with other schools.
- Sarah may use unnamed data and information about me gained from the research for the thesis in other ways, like if she gives talks about the research, or if she writes about it for magazines or journals or books etc.
- Sarah has to keep all of the information about me that she uses when she writes up her research so that in the future other people can check to see that she has been telling the truth.
- I have the right to withdraw from the research. If I withdraw within the first three weeks Sarah will not use any information about me in the research. I can still withdraw after three weeks but Sarah can use the information collected about me in the thesis until the time that I withdraw if she wants to.
- If I withdraw from the research no further information about me will be collected for the research from the time I withdraw.

TUAKANA CONSENT FORM

- If I have any concerns or questions at any time I can contact Sarah Grant by phone (06) 867 5706 or by arranging a meeting time with Sarah.
- I am also able to contact the research supervisors Professor Ted Glynn (Ph: 07 838 4518), and/or, Doctor John Medcalf (Ph: 06 876 7871), C/- the University of Waikato, School of Education, Private Bag 3105, Hamilton.

I would like to be acknowledged in the acknowledgement section of the thesis and any future presentations and publications. Yes No

Name: _____

Signed: _____ **Date:** ____/____/____

COLLABORATIVE ACTION PLAN
Tuakana – Teina Kōrerorero (Conversations)

School: [A]

Date: 21.03.05

Team members present: [Key Teacher 1], [Key Teacher 2], [Researcher]

Type of peer tutoring programme:

Tuakana – Teina Kōrerorero. Cross Age Peer Tutoring in Oral Language

Organization:

Within class

More than one class ✓

Whole school

Number of students: 24

Parental Involvement: ✓

Where will the programme take place? [Key Teacher 1]'s room. Room 1

Length of each session? ½ hour

Length of programme? 6 weeks

Time of programme? to

Four days per week (Tuesday, Wednesday, Thursday, Friday)

Monday the tuākana have a feedback/feed forward session

Review of the programme? At the end of each phase of the 3 phase intervention.

Criteria for selecting students:

Tutors: Skill ✓ Social ✓

Tutees: Skill ✓ Social ✓

Age range (Same age or not): Not

Other criteria or comments: Tuākana may be struggling in other curriculum areas however they need to be able to take on board the TALES procedure that they will be trained in.

Assessment:

Baseline and Comparison Data

Collected by:

When:

Tuākana:

Daily checklist summary sheet

Tuākana

Ongoing each session

Anecdotal observations

Teachers

Ongoing (As pertinent)

Group interviews

Researcher

Pre, mid, post int.

Teina:

Junior Oral Screening Tool (JOST)

Researcher

Pre & end of each of

Record of Oral Language (ROL)

Researcher

the 3 phases of

Auditory – Vocal Association (AVA)

Researcher

intervention

Anecdotal observations

Teachers

Ongoing (As pertinent)

Group interviews

Researcher

Pre, mid, post int.

Possible candidates:

[Names have been replaced by a student number]

Group 1

Teina 1

Tuakana 1

Teina 2

Tuakana 2

Teina 3

Tuakana 3

Teina 4

Tuakana 4

Group 2

Teina 5

Tuakana 5

Teina 6

Tuakana 6

Teina 7

Tuakana 7

Teina 8

Tuakana 8

Group 3

Teina 9

Tuakana 9

Teina 10

Tuakana 10

Teina 11

Tuakana 11

Teina 12

Tuakana 12

Description of peer tutoring programme:

A parent meeting will be held, and written permission for students to be involved in the research and programme obtained.

Data will be collected,

The tuākana will be trained in the TALES Toolkit procedure (See attached). It will be stressed in the training that there is no particular order that they must implement TALES, but rather it is a toolkit to assist them to meet their goals.

The tuākana will play with their teina each Tuesday, Wednesday, Thursday and Friday from 11.30am until 12.00pm. They will use the containers of toys or activities e.g., play dough, as props for their conversations. The containers of toys or activities will be rotated (possibly one a day) so that all have a variety of toys to play with, or activities to do throughout the programme.

The teina teacher and/or researcher will monitor by roving around the pairs at regular intervals and provide on the spot feedback if necessary, however it is expected that the teacher will also be able to continue working with other students through out this time.

Each day the tuākana will complete a checklist and summary sheet.

Each Monday the tuākana will be involved in a feedback/feed-forward session with the teacher and, researcher, if possible.

Each day each tuakana – teina pair will be taped. This is to assist with monitoring and feedback and helps ensure the integrity of the programme. It is not expected that the researcher and teachers will listen to every tape however five minute probes of the tapes may be used during feedback sessions to promote tuakana reflection on their sessions. The researcher will transcribe one five minute probe weekly of the pair selected for detailed data analysis. It is important to note that the tapes need to be treated as confidential and usual school procedures would apply if any disclosures were made on tape.

The tuākana will be trained to use the tape recorder and to write their name and the date each time they are taped.

Parent consent consultation meeting:

Date: 12.04.05

Time: 3.00pm

Place: Room 1

Facilitator of meeting: Researcher (supported by teachers)

Letter written by researcher and sent/given to parents by: Give to school by Tuesday so they can be given out at interviews on Wednesday the 30th.

Date: Send reminder on the 11th April

Equipment and materials needed for the training programme:

Containers (Enough for one per pair) (Researcher will provide)

Folders for Tuākana (Researcher will provide)

Toys
Activities } Researcher will provide.

Stickers (Researcher will provide)

Tapes (Researcher will provide)

Tape recorder (Researcher will provide)

Training of Tutors:

Who will train the tutors? Researcher with support from the tuākana teacher and the teina teacher. Due to the multiple baseline approach there will be three phases with training sessions for each phase. The teachers may take more responsibility for training at each phase with the researcher providing support.

When will training commence?

Where?

Length of each training session? 1 hour

Length of training programme? 2 days.

Content of the training programme:

Day 1:

Discuss the Tuakana – Teina concept and responsibilities – Ako.

Some students will already have experienced Peer Tutoring programmes – link into this knowledge.

Discuss how children learn to talk through talking and that if they have difficulty talking it makes it hard to learn to read and write. Talk about how some children hit and hurt others because they can't talk about what they want, their problems, or needs.

Stress that the goal is to have FUN, as well as helping their teina to TALK MORE and ask questions by 'giving over words', listening, and being friendly.

Introduce the procedure (See attached):

TALES Toolkit

T Talk
A Ask
L Listen
E Encourage
S Say

Discuss that it is voluntary to be involved, but once involved they need to see it through to the end of the programme.

Day 2:

Revisit the TALEs Toolkit.

Introduce the tuakana checklist summary sheet and discuss.

Discuss accountability and taping.

Practice through role-play with the toys/activities. Stress the importance of teina choosing the toys to play with each day (rather than tuākana choice).

Have the tuākana take turns as observers to comment on components of TALEs observed during role-plays.

Tuakana checklist

Complete with your teina

Week:

Tuakana:..... Teina:.....

Date:

I REMEMBERED TO:	Tues	We d	Thur s	Frid
Date:				
Set up the tape before my teina comes				
Talk a lot to the teina about what we were doing				
Ask the teina what they wanted to play				
Listen actively to my teina by <ul style="list-style-type: none"> • Making listening sounds e.g., mmm • My body language e.g., nodding, facing teina 				
Encourage my teina by smiling, being friendly, and praising them				
Say: The date and name on tape at the start and finish				
Goodbye				
Hello &				
Their name lots				
Give my teina a sticker				
Pack up gear				
Date and name the tape				
I achieved my personal goal this week				

Personal goal

This week I am learning to:

I will know I have learned this when:

Any other comments:

Summary sheet

Today we talked about:

Tuesday

Wednesday

Thursday

Friday

Special Education Service
 SPEECH-LANGUAGE THERAPY CLINIC
 C/- Flaxmere College
 Henderson Road
 FLAXMERE
 Hastings

AUDITORY-VOCAL ASSOCIATION ASSESSMENT OF VERBAL ATTAINMENTS

(Adapted from McCarthy & Kirk, 1961)

For administration to children aged 5 years 0 months to 5 years 2 months

This assessment employs ability to comprehend verbal analogies as an indicator of the child's level of verbal attainments. Responses are elicited by controlled association.

ADMINISTRATION

Specific directions are given on the test form. The test should be introduced by telling the child that some sentences will be read which the examiner would like the child to finish off.

Give encouragement for the child to respond. Repeat reading of an item will generally not be necessary. Do not indicate that the child's responses are wrong. Do not on any account reveal the correct responses to the child.

SCORING

Generally, correct responses will be one of those shown on the test form. Other responses are acceptable only if they are close equivalents and indicate understanding of the analogous relationship involved in the item.

The following responses for example, are clearly wrong:

Item	1	"Pillow"	4	"Shoes"
	11	"Scissors"	20	"Soft"

Note that:

"Flat" or "Long" are unacceptable responses to Item 21 but "Long and square" is an acceptable response.

Grammatical perfection is not required in responses. Eg "Feets" is acceptable in Item 4.

Interpretation Of Results: (For Children Aged 5.0 To 5.2)

Number of items correct

4 and below	Probably exceptionally low verbal attainments. * Suggest further observation of child. * May the consider referral to Special Education Service.
5-9	Verbal attainments probably in the range requiring an experiential programme at the 4 year old developmental level. * eg story-telling by child; role-taking play, etc.
10-20	Verbal attainments probably in the range requiring entry into an emergent/programme. * eg use of caption books, picture-word matching, etc.
21 and above	Probably exceptionally high verbal attainments. * Suggest further observation of child, then consider appropriate programming.

Oral Language Assessment

1. I sit on a chair. I sleep on a (bed, cot, bunk, couch).
2. I eat from a plate. I drink from a (glass, cup, mug).
3. A bird flies in the air. A fish swims in the (water, sea, pond).
4. I hit with my hands. I kick with my(foot, feet).
5. John is a boy. Mary is a (girl).
6. Scissors cut. A pencil (draws, marks, writes).
7. I cut with a saw. I bang with a (hammer).
8. Soup is hot. Ice-cream is (cold).
9. A red light says stop. A green light says (go).
10. During the day we are awake. At night we (sleep).
11. I eat with a spoon. I cut with a (knife).
12. On my hands I have fingers. On my feet I have (toes).
13. A boy runs. An old man (walks, limps).
14. Cotton is soft. Stones are (hard).
15. An explosion is loud. A whisper is (soft, quiet, low).
16. Mountains are high. Valleys are (low, deep).
17. A man may be a king. A woman may be a (queen, princess).
18. A balloon is fat. A pencil is (thin, skinny).
19. Vinegar is bitter. Sugar is (sweet, sweeter).
20. Iron is heavy. A feather is (light).
21. A dollar is round. A ruler is (straight).
22. A rabbit is swift. A snail is (slow).
23. Sandpaper is rough. Glass is (smooth).
24. Three is an odd number. Six is an (even) number.
25. A cube is square. A sphere is (round, circular).
26. An ocean is deep. A pond is (shallow).

SCORE INTERPRETATION (= low verbal attention)

1 = 2 years 5 months	2 = 2 years 6 months	3 = 2 years 8 months
4 = 2 years 10 months	5 = 3 years 1 month	6 = 3 years 3 months
7 = 3 years 6 months	8 = 3 years 8 months	9 = 3 years 11 months

Needs story telling by the teacher / parent / aide; role-play; required a non-reading programme.

10 = 4 years	11 = 4 years 5 months	12 = 4 years 8 months
13 = 4 years 11 months	14 = 5 years	15 = 5 years 6 months
16 = 5 years 11 months	17 = 6 years 1 month	18 = 6 years 6 months
19 = 6 years 10 months	20 = 7 years 3 months	

Caption books / picture /word matching / alphabet / emergent reading

