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Māori Education Research
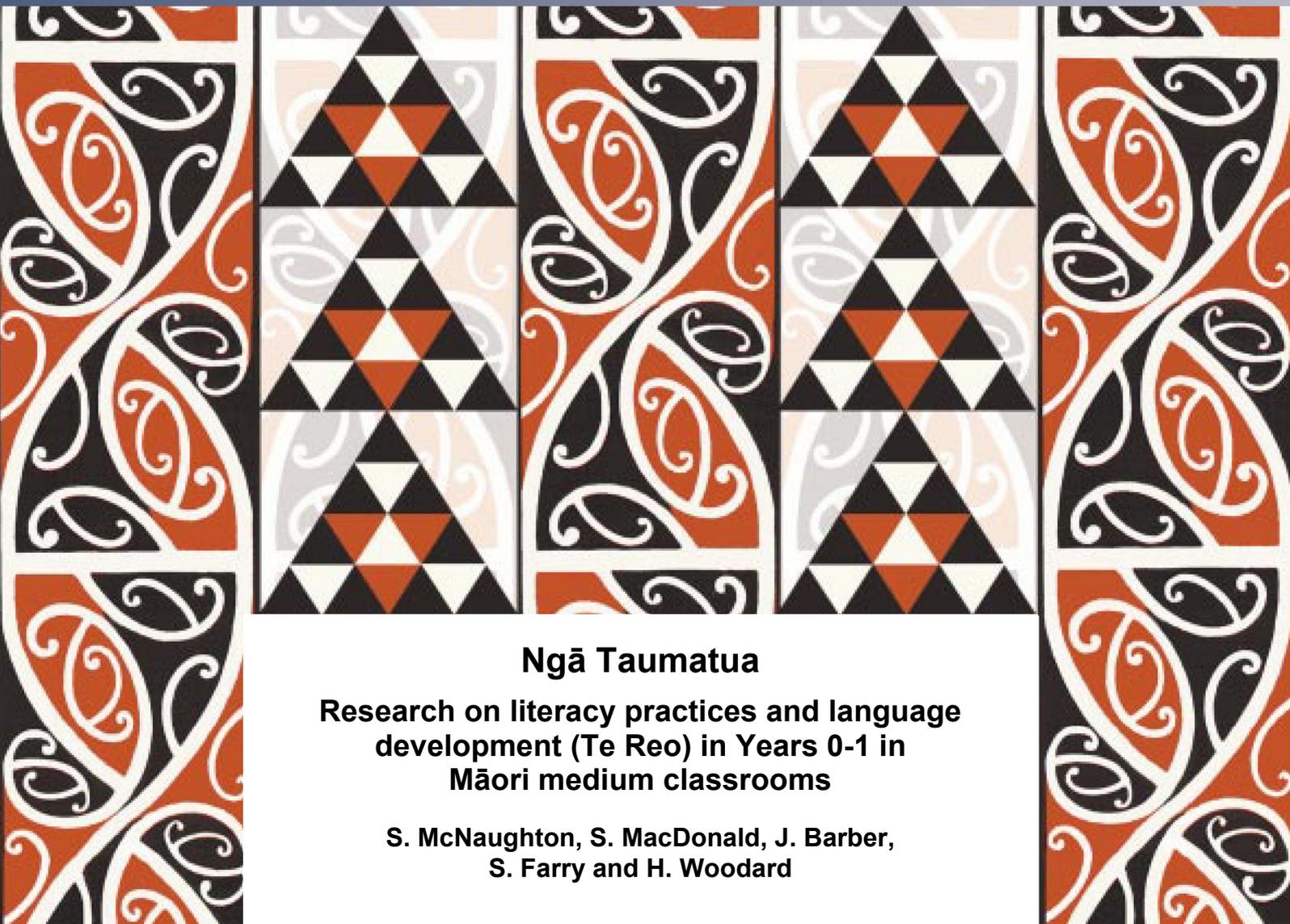
Ngā Taumatua

Research on literacy practices and language development (Te Reo) in Years 0-1 in Māori medium classrooms

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Ngā Taumatua – Research on literacy practices and language development (Te Reo) in Years 0-1 in Māori medium classrooms

FINAL REPORT

AUCKLAND UNISERVICES LIMITED

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November 2004

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Table of Contents

vi

Executive Summary

This report describes three interrelated studies. The studies involve a limited evaluation of a professional support programme in Māori medium (Ngā Taumatua), an analysis of features of literacy instruction over the first year in Māori medium classes, and a developmental description of children's literacy and language over the first year in Māori medium.

The major focus of Study 1 was on describing changes in Ngā Taumatua teachers' ideas and knowledge about best practice for literacy learning and instruction for Māori medium and how they perceived the programme's effects on their roles. Ten Ngā Taumatua teachers were interviewed within 10 weeks of starting their 12 month training programme and again within 5 weeks after finishing their training. Interviews provided background details of the Ngā Taumatua teachers and about their ideas about literacy including their views of effective instructional practices. Eight questions were used in the interviews that included questions on how instructional activities relate to oral language development and the instructional focus of specific aspects of literacy instruction.

The approach to the analyses was both qualitative and quantitative. The Ngā Taumatua teachers responses to the 8 questions used in the interviews were rated using a 4 point scale. The findings indicated that the Ngā Taumatua programme was associated with a marked development of the teachers' professional knowledge that map on to the emphases built into the programme. Ngā Taumatua teachers were found to be particularly strong in areas to do with planned and evidence-based interventions, with teaching in the context of bilingualism, and with the significance of home-school partnerships. In addition, the in-depth academic and professional knowledge was effectively integrated with Māori concepts of teaching and learning. The answers highlighted the need for further learning including in the areas of writing assessment and relationships between reading, writing and oral language. The levels of knowledge by the Ngā Taumatua teachers in these areas reflect the levels of knowledge also needed by teachers in mainstream classrooms.

There are several implications from this study: The Ngā Taumatua programme is a very effective vehicle for developing highly knowledgeable professionals; and there is a need to develop professional and research knowledge in areas of early literacy teaching and learning, particularly in the teaching and learning of writing and assessments tools for the early stages of writing in Te Reo Māori.

Study 2 aimed to describe and analyse patterns of teaching in literacy to develop descriptions of good practice in Y0-Y1 Māori medium classrooms. Māori medium sites were selected that were known to reflect current best practice in literacy instruction. At the beginning of the study 5 Kaiako were observed in their classrooms. The study was completed with 3 Kaiako. The design provided a limited developmental description of teaching with children over the age range 5.0 years to 6.0 years. The short term longitudinal descriptions mean that aspects of language, literacy and instructional practices at one time point could be related to aspects of language, literacy and instructional practices at a second time point. Across the Kura four core classroom instructional activities were observed at both Time 1 and Time 2: Instructional Reading, Reading To, Instructional Writing and Shared Writing.

Measures of oral language indicated that instructional activities were sites where receptive and expressive language acquisition could occur. The basic pattern of teaching involved high rates of questions focused on learning items such as letters and letter combinations in words and a high rate of feedback. The latter is a property of instruction known to impact on learning in the context of high quality programmes in English-medium classrooms. In addition, there was a noticeable focus on

enhancing children's awareness of concepts about print both general and specific to reading and writing in Te Reo Māori. The rates of extended or elaborated talk by kaiako appeared generally quite low in relationship to other types of interactions and this would be a potential limiting factor in the development of complex language forms judging from the research in English-medium classrooms.

The data provide some answers to the question of how teachers are able to provide instruction which enables children with different degrees of control over Te Reo Māori to develop language needed. One answer focuses on the general level of input and production. As a whole the core activities provided an impressive amount of language input and repeated opportunities for production with feedback. The picture that emerges from the analysis of activities and their components is that they systematically provided different patterns of exposure to and uses of language. The variability is largely determined by goals and the interactional structures around those goals.

The results also suggest that a sound literacy programme at the beginning of Māori medium schooling need not compromise the goals set for developing and revitalising Te Reo Māori. In addition, given well designed instructional activities, language acquisition and literacy learning can be mutually facilitative. Quality instruction with the varying profiles of children's language and literacy on entry to school would capitalise on the vehicles provided by core literacy activities. Furthermore, there is a need to increase the complex language used by both teachers and children in the core literacy activities. Finally, the research experience of selecting teachers in Māori medium schools raises some important issues for the work of Ngā Taumatua and for the selection and retention of teachers. The high turnover and shifts in levels and placement has several consequences. One concern is the continuity of learning experiences for children.

Study 3 aimed to develop descriptions of literacy and language development from Y0-Y1 in children entering Māori medium classrooms. Across the 4 Kura 24 Tamariki were assessed at 5.0 years and 16 of these at 6.0 years. For 9 children English was the language spoken at home; for 12 children Te Reo Māori was the language mainly spoken at home and; for 3 children Te Reo Māori was the only language spoken at home. Literacy and language measures were collected at 5.0 years and then after four terms at school, when children were 6.0 years of age. The literacy assessments include those from Aromatawai Urunga-a-Kura: AKA (Te Tāhuhu o te Matauranga, 1999), and 5 sub tests of He Mātai Āta titiro ki te Tūtukitanga Mātatupu, Pānui, Tuhi (Rau, 1998). The measures of the children's Te Reo Māori language ability utilised a retelling activity (Kii Mai) and an elicited conversation activity.

The descriptions of the 24 children from the beginnings of school to after a year in instruction showed a number of features. Firstly, there were wide individual differences in literacy and language on entry to school. Thereafter there was rapid development in literacy and substantial growth in receptive and expressive language. An interesting finding was that the children found the more structured retelling task easier to do than the more open ended narrative task, raising issues about the experience children have prior to school in past event narratives. As experience with these narratives has been found in English to be related to literacy and particularly comprehension at school (Dickinson & Tabors, 2001) this might be an area for further development in educational practices in Te Kōhanga Reo and at the beginning of school.

In addition, the literacy and language measures were generally highly intercorrelated. At the beginning of instruction this suggests that developing control in Te Reo Māori is associated with developing emergent literacy. After a year of instruction the level of control in Te Reo Māori became more significant for the more directly text-related measures such as writing vocabulary and concepts about

print. Age at first testing was not necessarily related to control of language, rather prior exposure through family and community experiences appeared to be important. As children moved through the first year age was not the determinant, of progress, rather it appeared it was the specific instructional experiences.

The research in this study demonstrates the usefulness to teachers of having measures which assess the quality of children's oral language (Te Reo Māori) and its development over the first year at school. Facility with such measures would enable more targeted support and guidance in Te Reo Māori. The instructional implications include the need for fine grained assessments of literacy and language profiles both standardised and embedded in everyday observation; and means of collecting background information on literacy and language experiences. Teachers in general need such detailed and personalised knowledge to teach effectively.

One of the overall implications for the Ngā Taumatua teachers and their work alongside Kura and Kaiako is the need for specific guidelines relating to language development and relationships with literacy activities over the early part of teaching in Kura. This needs to be specifically about what is known about pathways and the variable profiles in development of Te Reo Māori. In addition, there needs to be a focus in the Ngā Taumatua programme on multiple forms of measurement including writing and language, not just those that measure reading abilities. In addition, more research that focused on language development and aspects of relationships with language learning contexts outside of school would be useful to this programme. This research needs to look at how whānau contexts can contribute to language and literacy development before school and over the transition to formal instruction at school. Lastly, these three studies indicate that in general there is a distinct need for specialist advice to classroom teachers around language and literacy development. An example of this is how teachers might benefit from specialist help in how to develop complex language uses including complex narratives.

x

Introduction

This report describes three interrelated studies. The studies involve a limited evaluation of a professional support programme in Māori medium, a developmental description of children's literacy and language over the first year in Māori medium, and an analysis of features of literacy instruction over the first year in Māori medium classes. The three studies were originally planned as one project but were effectively conducted separately. A brief introduction to each study is provided here and elaborations are provided with the report for each study.

STUDY 1 : FORMATIVE EVALUATION

Ngā Taumatua was developed in 2002 as a one year long literacy support pilot project in Māori medium education. The project involved twelve Resource Teachers of Māori, across Aotearoa NZ, who were undertaking extensive literacy training to function as specialist literacy experts providing specific guidance, planning and professional support for teachers in Māori medium. The Ngā Taumatua programme was designed to provide specialized professional development in Māori medium specific literacy initiatives. The training provides opportunities to develop further expertise in initiatives developed specifically to support Junior School literacy programmes in Māori (Years 0 – 3)[1]. It comprises a combination of theory, practicum and includes a research component. One of the outcomes of the programme is to provide policy advice to the Ministry of Education suggesting how Ngā Taumatua positions might become a more permanent feature of the support services for Māori medium education. The programme therefore explores the potential role of Ngā Taumatua as practitioners and researchers with a developing expertise in literacy that can contribute to the future development of Māori medium literacy initiatives as well as act as change agents in schools.

At the time of planning the evaluation it was not possible to design a full evaluation. Implementation of the project had already commenced when the research project was being developed; it was a pilot and was developing the training package as it progressed. A more limited evaluation was, therefore, designed. The evaluation focused on specific outcomes of the programme for the Ngā Taumatua teachers. Given that the programme is concentrated on building up the literacy expertise of the Ngā Taumatua teachers, the major focus was on describing changes in their ideas about best literacy practice for Māori medium and how they perceived the programme's effects on their roles. These areas of deep knowledge have been identified as significant in recent research on interventions to change teaching practice (Coburn, 2003)

STUDY 2: 'BEST' PRACTICE IN LITERACY INSTRUCTION

The original intention was to look at the Ngā Taumatua teachers and to examine the link between their knowledge developed on the course and their work developing aspects of best practice in schools. As mentioned above this was not possible. However, an opportunity was provided by the training of Ngā Taumatua teachers to establish some baseline features of best practice in literacy instruction in Māori Medium. The present descriptive research project worked in collaboration with their training to collect descriptions of how teachers respond to the oral language competencies of students upon arrival as new entrants. This involved descriptions of core instructional activities in literacy (e.g., reading to children; guided/ instructional reading; language experience / shared writing and guided writing). The focus was on the first year at school and how classroom activities provide vehicles for effective

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[1] The training now extends to year 8

instruction at this crucial transition point. It was designed to add to descriptions of best practice at Harakeke A reading level (i.e., pre reading/emergent; Berryman, Rau & Glynn, 2001), and systematically explores the relationships between oral language and literacy activities in Māori medium classrooms.

There is very little research that provides this type of information. There are the seminal analyses for teaching and assessments at 6.0 years in Rau (1998; for Māori medium instruction), and general descriptions of teaching and learning strategies, materials and assessments from 5.0 – 9.0 years by Bishop, Berryman and Richardson (2001; for students receiving instruction in Māori). The former provides details for assessing progress and associated instruction in the first year and the latter provides a cultural and pedagogical framework for looking at best practice.

The Bishop et al. (2001) aimed to identify effective teaching and learning strategies and effective teaching materials for improving the reading and writing in Te Reo Māori of students aged five to nine in Māori-medium education. In addition the study sought to identify the ways in which teachers assessed their effectiveness of their teaching of reading and writing.

Bishop et al. (2001) found that effective teachers were able to create culturally appropriate and responsive contexts for learning. These effective teachers reported that the purpose of monitoring students' progress was to inform their own teaching in order to progress student learning. They reported that assessments were taken over time in order to match student behaviour to teaching strategies and resources and the assessment of progress was reported to parents and included in planning for teaching. In addition, effective teachers attempted to set up an 'oral rich environment', usually through the use of prior or real-life experiences of the children and they organised their literacy programmes to cater for a wide range of Māori language skills. The focus was on a language saturated environment to extend the children's vocabulary and understandings. (In the present study we have demonstrated how this may happen in literacy). The effective teachers were also actively seeking and participating in developing their own skills and knowledge. This demonstrates that issues in professional development are clearly needed.

Detailed descriptions of practices across the primary years of teaching in Māori medium are critically needed to inform the practice of Ngā Taumatua specialists. The Resource Teachers of Literacy (RT:Lit) English / mainstream specialists can draw on a range of resources including extensive research-based descriptions over many years of teaching and learning in English medium settings (Education Review Office, 2004). There are multiple descriptions of literacy practices (for use in English medium settings) available from the Ministry or Learning Media (such as 'Reading in Junior Classes'; 'Effective Literacy Practice'; 'The Learner as Reader'; 'Dancing with the Pen'). The provision of targeted guidance through Ngā Taumatua and the development of interventions in Māori medium need as much research-based knowledge of current practices and children's development as is possible.

In essence there were two research questions here. One was a description of literacy instruction at the beginning level. But secondly and more directly the question was how the instruction provides a basis for language acquisition for the range of control of Te Reo Māori children had on entry to school.

STUDY 3: LANGUAGE (TE REO) AND LITERACY DEVELOPMENT IN MĀORI MEDIUM

In addition to developing the research base in instructional practices, as mentioned above, there is a pressing need to examine relationships between features of children's language development in Te Reo Māori and their literacy development. An international literature exists on relationships in an L_1 (meant here in this report as a child's first language developed at home) and some beginning studies of relationships in bilingual and biliteracy circumstances (Snow, Burns & Griffin, 1998). For example, strong relationships are known to exist between vocabulary development and comprehension; and between phonemic awareness and decoding abilities. In the latter area there is research that shows strong development in an L_1 is related to effective literacy acquisition in L_2 (a child's second language) and simultaneous bilingualism has advantages for biliteracy development (Tabors & Snow, 2001). But these situations do not easily apply to the circumstances of elective bilingualism and the various patterns of Te Reo Māori and English relationships that exist for children in Māori medium. Tabors and Snow (2001) introduce notions of children having different degrees of bilingual and biliteracy status associated with variability in language inputs. Children who have a strong first language input in the early years, complemented by early childhood settings which provide rich first language experiences (in bilingual to full immersion programmes), yet who live in communities in which the dominant language is English, nevertheless arrive at school as 'incipient' or 'emergent' bilinguals. Other children who have had mixed inputs under conditions where the input does not complement and add to the first language experiences may be 'at risk' as bilinguals, and not strong in either language. This description mirrors an analysis by researchers who identified different groups of children on entry to school who ranged from strong in Te Reo Māori and relatively strong in English, through to children who had limited control over either Te Reo Māori or English (Berryman, Glynn, Walker, Reweti, O'Brien, Langdon, & Weiss, 2001).

The presence of children with different degrees of control over two languages in Māori medium classrooms, together with different degrees of emergent literacy knowledge and skills in two languages raises important developmental questions. The third study explores these relationships, and provides some limited time series analyses of how acquisition in Te Reo Māori oral language and literacy might be related at the beginning of school and over the first year at school.

SUMMARY OF RESEARCH AIMS

Study 1

a) To provide an initial evaluation of the Ngā Taumatua programme focused on the development of professional knowledge through the teaching programme. The specific question was: 'What changes in knowledge about literacy learning and instruction take place in the Ngā Taumatua teachers in Ngā Taumatua?'

Study 2

b) To describe and analyse patterns of teaching and learning in literacy – 'good practice': Y0 – Y1 Māori medium. A specific question addressed is how teachers effectively teach early literacy skills to children with varying degrees of control in Te Reo Māori and in English.

Study 3

c) To develop descriptions of literacy and language development from Y0 - Y1 in children entering 'Māori medium classrooms'.

Study 1: Formative Evaluation

One major focus was on describing changes in Ngā Taumatua teachers' ideas and knowledge about best practice for literacy learning and instruction for Māori medium and how they perceived the programme's effects on their roles.

To enable comparison below we list a number of the goals of the Ngā Taumatua programme curriculum. The goals were to give the Ngā Taumatua teachers:

- Knowledge to enable them to function as literacy experts

- Knowledge of specific literacy initiatives

- Research and development expertise

METHODOLOGY

Ngā Taumatua teachers

The twelve Ngā Taumatua teachers selected for the Ngā Taumatua programme were all Resource Teachers of Māori (see Appendix 1). The evaluation was completed with 10 teachers who provided their written consent and agreed to participate in the evaluation (one teacher was unable due to a career change and one declined to participate). Their years of experience as Resource Teachers of Māori ranged from 1 year to 13 years. They came from varying teaching experiences; from mainstream schools, mainstream schools with Māori-immersion or bilingual classes and full Māori immersion schools. Their number of years in teaching in classrooms ranged from 5 years to 30+ years, while their years in Māori immersion ranged from 0 years to 10 years. While all the teachers had a Diploma of Teaching qualification, most had at least two other, equal or higher qualifications ranging from Bachelor Education to Master of Arts. At the initial interview three of the teachers indicated that Te Reo Māori was their first language and the remaining teachers indicated that they had learnt Te Reo Māori as a second language[2]. All the teachers were female. Geographically, the Ngā Taumatua teachers were located throughout New Zealand, in both rural and urban settings, from Auckland to Invercargill.

Design

A short term longitudinal design was used. At the first time point, within 10 weeks of beginning their course interview data were collected from the Ngā Taumatua teachers. At a second time point, at the end of their 12 month week training programme further interview data were collected from the Ngā Taumatua teachers.

Interviews with Ngā Taumatua teachers

A major aim of the project was an evaluation of the training programme focused on the development of Ngā Taumatua teachers' knowledge about classroom practices. The specific research question was: What changes in knowledge about literacy learning and instruction take place in the Ngā Taumatua teachers in Ngā Taumatua?

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[2] A range of proficiencies exist within these terms

Interview data provided background details of the Ngā Taumatua teachers and about their ideas about literacy including their views of effective instructional practices. There already exists an important description of teacher beliefs in Bishop et al. (2001). The purpose was to target specific ideas about instructional practices and effective forms of instruction. There were several parts to the interview, and ideas were reviewed in 8 areas. These areas were how instructional activities relate to oral language development; as well as the instructional focus of specific aspects of literacy instruction (e.g., the role of prompts to use graphophonic sources of information; forms of instruction that enhance acquisition of comprehension strategies). The areas were derived from the outlines of Ngā Taumatua courses and the description of the Ngā Taumatua programmes aims.

The initial interviews took place early on in the training programme. At this time the academic programme had been running for 10 weeks. Each trainee was invited to participate. Ten provided their written consent and agreed to participate in the interview. The interviews took place in Hamilton during the Ngā Taumatua teachers first block course. The interviews took approximately 120 minutes and were conducted in both English and Te Reo Māori. The questions in the interview were designed to generate a collegial discussion around several general areas of professional knowledge. The questions related to the goals of the Ngā Taumatua training and the focus of the observational research of classroom activities in Study 2. Interviews at this time provided a baseline against which the effects of further academic work and professional development associated with the programme could be compared. The interviews were repeated within five weeks after the programme had been completed, again the interviews took place in Hamilton. Eight of the 10 trainees who were initially interviewed were re-interviewed; in two of the 8 cases trainees sent their responses to interview questions because they were unavailable at the time the 2nd interviews were conducted. The interviews were transcribed and summarised into key ideas relating to each of the questions.

The approach to the analysis was both qualitative and quantitative. Partly this draws on a psychological model of expertise (McNaughton, 2002), which identifies an articulated knowledge base and awareness (in the sense of monitoring and self regulation) as two components of expertise. These can be probed by reflective interviewing, unlike the third dimension, which is the strategic ways of carrying out what one is expert at. The latter ideally requires observation of actual performance or simulations (and we examine some aspects of kaiako practices in Study 3). The idea of expertise can be located within Kaupapa Māori frameworks for considering effective pedagogy. For example, Bishop et al. (2001) describe an *Effective Teaching Profile* developed for effective teaching with Māori children in mainstream schools. They identify three dimensions: Manaakitanga (teachers demonstrate on a daily basis that they care for Māori students as culturally located human beings); Mana Motuhake (Teachers demonstrate on a daily basis that they care for the performance and learning of Māori students) and Ngā turanga takitahi me ngā mana whakahāere (Teachers are able to create a well-managed learning environment). Caring for learning and creating a well managed learning environment draw on an articulated knowledge base about effective forms of teaching and learning for Māori students. Given the idea of an articulated base of knowledge it is possible to rate degrees of specificity of that knowledge without trivializing the need to hold these general frames of reference.

A means of assessing the breadth and depth of the Ngā Taumatua teachers knowledge at the beginning and at the end of the programme was developed. The Ngā Taumatua teachers responses to the 8 questions used in the interviews were rated using a four-point scale. The questions and the scale used are outlined in Table 1. The methodology was chosen to enable change over time in knowledge to be

Ngā Taumatua clearly represented. The rating scale is not assumed to have equal intervals, rather to capture global ratings of the extent and quality of knowledge.

The interviews in Te Reo Māori were translated into English by one member of the team and subsequently checked by a linguist and native speaker at the University of Auckland. The ratings were carried out on the English versions, but in the case of those that were translated the ratings were also double checked on selections of the originals in Te Reo Māori.

Four raters were trained to use the 4 point scale. The training occurred in two-one hour training sessions in which high accuracy was reached on the use of the scale with one trainee's transcript. Following this the remaining 9 Ngā Taumatua teachers responses (from Time 1) were rated, with one of the Ngā Taumatua teachers being rated in common by each of the four raters. This provides a sensitive test of the reliability of the ratings. Inter rater agreement was computed by checking whether all four raters agreed on the rating. A different rating by any rater was counted as a disagreement for that question. The overall agreement (agreements divided by agreements plus disagreements multiplied by 100) was 75%. That is, there was high inter rater agreement; there were disagreements on two of the questions and the disagreement was a matter of a difference of 1 point in each case.

Table 1.   Questions / Knowledge Assessment Scale - Ngā Taumatua Teachers

1. The kaupapa of Māori medium is focussed on language (Te Reo) learning. How do reading and writing in the classroom contribute to learning?
   1. *No relationship described*
   2. *Little description of relationships, at a general level*
   3. *Some description of relationship, with simple explanations*
   4. *Extensive description with explanations of at least two examples*

2. What are the best ways to help children in Māori medium learn comprehension in reading?
   1. *No ideas*
   2. *Limited description of ways, at a general level*
   3. *Some description of relationship, with simple explanations*
   4. *Extensive description with explanation of at least two specific examples*

3. How would we know if local interventions in Māori medium classrooms make a difference to children's school achievement?
   1. *No idea*
   2. *Limited ideas about evaluation/monitoring*
   3. *Some ideas about evaluation/monitoring*
   4. *Extensive ideas about evaluation/monitoring*
      (e.g. ideas of Methodology, Design)

4. What is an example of assessment in Māori medium reading?
   1. *Can't identify an assessment*
   2. *Identify limited description, no functions explained*
   3. *Full description, two functions explained*
      - *summative*
      - *formative*
   4. *Full description, full functions with critique of the assessment tool*

5. What is an example of assessment in Māori medium writing?
   1. *Can't identify an assessment*
   2. *Identify limited description, no functions explained*
   3. *Full description, two functions explained*
      - *summative*
      - *formative*
   4. *Full description, full functions with critique of the assessment tool*

6. What is an example of assessment in Māori medium oral language?
   1. *Can't identify an assessment*
   2. *Identify limited description, no functions explained*
   3. *Full description, two functions explained*
      - *summative*
      - *formative*
   4. *Full description, full functions with critique of the assessment tool*

7. What are the best ways to promote good community-school relationships in Māori medium settings?
   - Nature of collaboration
   - What ways of collaboration promote literacy and language achievement at school?
   1. *No ways identified*
   2. *Little description at a general level*
   3. *More description with no evaluation*
   4. *Extensive description of ways and a rationale*

8. Bilingualism – Children in Māori medium are developing bilinguals. What are forms, threats / ways in which teachers can optimise bilingual development?
   1. *Non-specific statement*
   2. *Theoretical / identification of threats (problems)*
   3. *Identify threats and description of a procedure*
   4. *Description of both forms and threats and ways to optimise*
      - *full description with rationale*

RESULTS

Ngā Taumatua teachers' knowledge
Time 1

Interviews were conducted 10 weeks after the commencement of the programme. An initial level of analysis shows that at the beginning of the programme (Time 1) the Ngā Taumatua teachers expressed different degrees of specific knowledge across each of the areas. For example, responses were more detailed and complex and the range narrower in questions about assessments at the early stages in reading and writing. In contrast, the range of specific responses was greater to questions about the teaching of comprehension. Responses to questions about optimising whānau – Kura relationships ranged from general to specific also. A wide range is illustrated in the following response by two Ngā Taumatua teachers to the question about how to build oral language from reading and writing.

Question 1 The Kaupapa of Māori medium is focussed on language (Te Reo) learning. How do reading and writing in the classroom contribute to learning? [3]

Ngā Taumatua Teacher (this was coded as a 1):

> *Reading and writing is a part of the greater aspect of us as Māori, Tikanga, Whaikōrero, Marāe. We will bring it back through reo*

Ngā Taumatua Teacher (this was coded as a 4):

> *I find here, the kids may not be able to read text, but they can read symbols really well. Through this, they are able to express what they want to say; what they feel; what they think, the picture or whatever it is, is telling them*

> *Using symbols and pictures to help build up that vocab is really important.*

> *Teach in contexts, not just out of context. Make more texts available that are about their world; Relevant to their experiences; Colourful pictures, colours significant to our kids; Pictures significant to our kids …*

> *Through writing, the children are able express what they want to say. A teacher can gauge prior knowledge. What language they have. What language they haven't got.*

> *A lot of Language experience. Pulling out unfamiliar words. Identify what they are. As a group put them into different context, making sure they are being used in the right context. They can usually pick up what it means, by, the surrounding words….*

> *A lot of open discussion. The teacher starts it backs off leaving them discuss and engage it. The teacher now observes the strategies they are using to trying to solve or gain understanding. The teacher acts as a facilitator. Coming in when needed. i.e. when the discussions, come to zero. Feeds more kupu, another idea, or another context, observing how they use that kupu in this different context.*

> *Bring the abstract into the classroom context - Whakatauki (Proverbs) Pick out words from the whakatauki. The kids look at the word to find what they mean. Change the context, to become meaningful for the students*

> *I am a strong believer in raising the quality of Māori language, Te Reo our children, **today** use. We need to start gearing our reo towards a more esoteric level.*

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[3] These two examples are extreme responses (coded 1 and 4 respectively)

Instructional languages, 'hāere mai, hāere atu, kei kōnei, kei kōra,' are your basics, you need those. For ten years or so, more or less, that's all the kids have been taught. Part of the problem is, the teachers are second language learners that is the level that their reo is at. But now, we have to pump it up a bit. We need to lift the level of that reo now, to me there's no, excuses.

Kākāriki kaiata. Translated into English, Kākāriki, green, kaiata, eat in the morning, which doesn't make sense. Kākāriki kaiata means to go and eat, but by yourself.

Simple things, but it's a language, which can be used all the time.

It's another notch, and it can be applied in other context as well.

Those are beautiful kupu we need to bring back and use to step our kid's language up. They can only learn by being taught. Step out of the little square box and take risks. They're not really risks, its just going through it and becoming comfortable with it and using it.

Expose our children to more adjectives. Not complex adjectives.

There are the basics, 'he rangi ataahua', but there was so many other kupu that can be used, that aren't being used. They need to come through in the readers. There is a lack of exposure.

Build up their synonyms more.

Using basic strategies, but building word banks like this up

Exposing our kids to those.

Our (traditional) waiata. The language is all in our waiata

But our kids don't understand it, maybe because the Kaiako doesn't understand it either.

Take that extra step to learn what they are.

I can have seven Marau to teach everyday, 'we all know that', but the reo takes us into all those Marau.

You have got to better prepare yourself by developing your reo more, so that you're a step ahead of your kids all the time.

A noticeable feature of the responses was the use of Māori concepts and frameworks in considering aspects of teaching and learning in literacy. Ngā Taumatua teachers related or incorporated specific tools or procedures or approaches to these touchstones, or incorporated them within these. In the following example, two responses to the question about data collection and the use of data to evaluate are related to the general concept of āhua.

Question 3   How would we know if local interventions in Māori medium classrooms make a difference to children's school achievement?

Ngā Taumatua Teacher (this was coded as a 3):

Assess the children's progress…. We ran TTT in our school. It's all about encouragement, tatari, tautoko, tauawhi. It was very successful. We do a pre-test with Running Records, and at the end of the ten-week period, we do another test of Running Records. Most of the time, they have progressed a level or a sub level up.

They looked forward to coming. They felt as though they were important.

The slower children's participation in class increased. Their attitudes… Their whole āhua… Their improvement in their work

Ngā Taumatua Teacher (this was coded as a 1)

The āhua of a child will show…There are big achievements and there are little wee steps of achievements. Having people who are familiar with Māori medium in the classroom. Achievement can happen in many ways, there is individual achievement, academic achievement and social achievements. It doesn't have to happen by getting all the ticks. It can happen by a child who one minute they're not talking, and next minute, they are. One minute they're shy, the next minute they're contributing

For a child who can sit still long enough to learn something, or long enough in amongst his/her peers, being able to just get on socially with the rest of them is an achievement.

This understanding of tools and procedures from a Māori perspective, framing them in terms of aspects of Kaupapa Māori and Tikanga was a strong feature of the responses at the commencement of the programme, and at the end. Further examples are shown below in answer to Question 1 and Question 2 of the interview. These are sections of answers and hence are not coded here.

Question 1 The kaupapa of Māori medium is focused on language (Te Reo) learning. How do reading and writing in the classroom contribute to learning?

Ngā Taumatua Teacher

….Curriculum is holistic and not compartmentalised…Not solely focussed on reading and writing as we have in Kaupapa Māori an added work load of revitalisation of the reo. And what's positive about Kaupapa Māori is that we encompass.

Ngā Taumatua Teacher

….Reading and writing in a Māori context, it's not just the classroom, it's not just a pen and paper. It's beyond that. Reading the unspoken word, reading the whakairo me ngā pou, the Marāe. It's all of those things. It's actually beyond just what's in the classroom.

Question 2 What are the best ways to help children in Māori medium learn comprehension in reading?

Ngā Taumatua Teacher

... need to build a wide language base, whatever it takes for that to occur. And in Māori medium obviously there's many pathways and many opportunities through karakia, through waiata, whakatauaki, there's language happening, language learning, not so much language teaching, but there's language learning happening all the time and you need to be aware of how much of that is going to be absorbed and attained by a child and whether or not it will simply wash over them, and if its washing over then its about exploring other ways to secure that language for them.

It's still about up skilling everyone that's involved in the child's education, as to what are significant indicators of that child's progress in their language. .. making sure that whānau understands that that's not the only measure in determining the child's success in reading.

Ngā Taumatua Teacher

> *...At the same time, you're teaching respect of the rights of others. So, even when they did go wrong, it wasn't a big laugh and a put down. It was, 'kia ora, he whakaaro he tēnei'. So that was much more subtle, and then they come on board and then we look for the māramatanga another way. But you also have to go back to what the child has said, and appreciate it. And mihi to them for saying what they said, and I have found by doing that, the child comes out a bit more and a bit more then before you know it, they've blossomed, and bloomed.*

Ratings

The breadth and depth of the Ngā Taumatua teachers' knowledge at the beginning and at the end of the programme was assessed more quantitatively by rating the Ngā Taumatua teachers responses to the 8 questions. The results of the ratings at the beginning and end of the programme are shown in Table 2.

Table 2   Ngā Taumatua Teacher Knowledge Rating Interview Time 1/Time 2

	T 1	T1/ii	T 2	T2/ii	T 3	T3/ii	T 4	T4/ii	T 5	T5/ii	T 6	T6/ii	T 7	T7/ii	T 8	T8/ii	T 9	T 10	Average Time 1	Average Time 2
Q.1	2	4	2	3	3	4	2	2	2	3	1	3	2	2	4	4	1	2	2.1	3
Q.2	2	4	3	4	3	4	2	3	2	3	2	3	3	3	3	3	3	3	2.6	3.3
Q.3	3	4	2	4	2	4	3	3	2	3	2	4	2	3	2	4	2	2	2.2	3.5
Q.4	3	4	3	4	3	4	2	3	2	3	2	3	2	3	2	3	2	3	2.4	3.3
Q.5	3	4	4	4	2	4	2	3	2	4	2	4	2	3	2	3	1	2	2.2	3.2
Q.6	3	4	2	4	4	4	2	3	2	3	2	4	2	3	2	3	2	2	2.3	3.4
Q.7	3	4	3	4	3	4	3	3	2	4	2	3	3	4	3	4	2	2	2.6	3.6
Q.8	2	4	3	4	3	4	3	3	2	4	2	4	2	3	3	4	2	2	2.4	3.6

Time 1

The ratings early on in the training programme show that the Ngā Taumatua teachers generally had moderate amounts of knowledge in each of the areas at the beginning of the programme (see Table 2). They were relatively strong in the areas of comprehension (Question 2; the interviews took place immediately after an initial session on comprehension), and community / school relationships (Question 7). The ratings between 2 and 3 need to be interpreted in terms of the 4-point scale (see Table 1). They generally show knowledge at a general level with some specific explanations or understanding of tools.

There were individual differences. For example Ngā Taumatua Teacher 2 and 8 had ratings mostly around 3, indicating somewhat more extensive knowledge in specific areas, while Ngā Taumatua Teacher 6 had scores around 2, indicating somewhat less specific knowledge.

The small differences between teachers on a limited scale have to be treated with some caution. But there did not appear to be a strong relationship between the teachers' qualifications or their years of experience and their knowledge at the beginning of the programme as assessed on this rating scale.

Time 2

The ratings at the second interview time (at the completion of the training programme) are also shown in Table 2. At time 1 the overall knowledge was rated as often at a general level, although as noted above there were areas of relative strength such as assessment of comprehension. The overall mean at time 1 was 2.4 on a four point scale across the eight dimensions (the typical Ngā Taumatua Teacher's score was 2.3). At time 2 the Ngā Taumatua Teacher's knowledge was rated across the eight dimensions as being able to provide some descriptions or some ideas with explanations through to extensive description with explanations and critiques (mean rating = 3.6 on the four point scale; for the 8 areas in which knowledge was rated). This suggests to us that the training programme was very successful in building knowledge across the areas.

Greatest gains in knowledge occurred in the area of knowing how local interventions in Māori medium classrooms make a difference to children's school achievement (Question 3). The level of response to this question made it an area of strength (mean rating = 3.5). We interpret this as showing Ngā Taumatua teachers having considerable knowledge now about how to plan for, use and interpret evidence around targeted initiatives in Māori medium. In the following excerpt Ngā Taumatua Teacher 2 identifies a local example, building the confidence of teachers in assessment; specifically how to take running records. After discussing the role of assessment and pre and post testing she described her knowledge about the intervention. :

> *... an intervention in the form of workshops, teaching all about the conventions of running records, how to take them and when to administer them records, how to take them and when to administer them. Eventually building up literacy profiles. An intervention at staff level, but ultimately it's going to filter down to what's gonna happen in the classroom. When there's nothing, when teachers are or aren't making decisions because they aren't sure how they should approach a child's learning, then that's your base line. Anything that you add in to that, will show whether or not it's made a difference. And you can measure that. The different terms you could put on the axis, the base line, no self confidence at the moment, after some intervention, increased self confidence. What is that going to mean, increased usage of those tools in the classroom. How will we know? Because there will be evidence of running records*

being taken, there will be evidence of children moving in their groupings in their reading.

Perhaps if you took that same graph and you had one for the teacher and one for the child, if the self confidence of the teacher builds to assess, how did that impact on the self confidence of that child in their reading, was there a correlation, because the teacher can now make an more informed decision of where that child was at, the reading, the child can now experience a little bit more success in their reading. There are all sorts of resources. (Trainee 2, Time 2)

There were two other areas of particular strength. One was knowing about how to promote good community- school relationships in Māori medium settings (Question 7). While it could be assumed that Māori medium provides a firm foundation for effective relationships, this finding suggests the importance of professional and academic reflection on how to promote the relationships. A second strength was knowing about how to optimise bilingual development (Question 8).

The highly scored answers to Question 7 identified processes of sharing knowledge and through specific examples provided rationales. In the following extract Ngā Taumatua Teacher 8 describes a number of events arranged by a Kura and its whānau such as Kapahaka. These events are interpreted in terms of important principles. One identified here is mutual respect:

We learnt from that, it wasn't just a Kapa haka thing, but those tutors made those parents <u>feel valued</u> (emphasis in the interview). Gave them responsibilities and respected their choices of how they went about achieving their responsibilities, for the group, for the whānau. So we just jumped on that thought. If your parents feel valued, they'll come back… and they do. (Ngā Taumatua Teacher 8, Time 2)

The answers to the question about bilingualism were extensive. Ngā Taumatua teachers discussed types of transition and research evidence for bilingual and immersion programmes and the transition to English. A typical example of reference to research and identification of issues was an analysis of the relationships between immersion and bilingualism in an international context:

…immersion is a step towards bilingualism. And for Māori, immersion education is to do with revitalisation of Te Reo and the tikanga, when we achieve that, then what? It would be the next step to bilingualism….And that having a view of overseas bilingual program, Canada in particular, the Welsh models, I could see then that Aotearoa is just a very very very small part of a bigger world. And yes what we're doing here in Aotearoa is to revitalise our language. But we have to do that as well as keep a perspective on the bigger picture because the kids have to be global citizens (Ngā Taumatua Teacher 1, Time2)

The areas for further learning were firstly to do with the relationship between building language and instruction in reading and writing (Question 1) and secondly the question about assessment in writing (Question 5). Answers to the first question tended to be general:

Reading and writing are pivotal to literacy success in a child's learning both in and out of the classroom. More importantly however, in my opinion (for children learning in Māori medium, in particular) students need to have a sound oral language base in order to successfully engage in reading and writing experiences. Without a sound oral language base, it becomes difficult for a child to bring their personal experiences into the context of the learning situation, as they are not able to articulate them, in the first instance, or relate them to a reading or writing context within the classroom. (Ngā Taumatua Teacher 3, Time 2)

Typical answers to the question about assessments in writing also remained relatively general:

> *10 Minute writing assessment, this assesses whether a child is an emerging, developing or an independent writer based on criteria. It assesses their efforts at proof reading and also the message, the structure, tenses, punctuation and spelling of the piece of writing* (Ngā Taumatua Teacher 4, Time 2)

The Ngā Taumatua teachers were aware of relative strengths and areas for further learning in their knowledge. For example, Ngā Taumatua Teacher 8 identified writing and writing assessment as an area of where there was a need for further learning (reiterating comments made by others)

> *Just Reading on its own takes a whole year. We haven't done much in Writing, let alone, Whakarongo and Korero, Speaking and Listening, and let alone, Visual and Presenting. We didn't even go there in depth, what does it mean in Māori medium. We've done presentation work but we haven't looked in depth at Concepts about Print. We haven't gone in depth on how to deliver those and how to develop teachers in that area. Even today in classes, teachers are asking. We incorporate, we're integrating them into mahi, but to do that individually, I don't know even if we can do them as individual, stand-alone lessons. But we find we can, in Kura that I work in, what they actually do is integrate into other areas and that's how they cover it all. In English medium, you have literacy leaders, literacy advisors, RT:Lits, in Māori medium, you have RTM's, who have had one year training in literacy*[4]*. Where's the fairness in that? We're expected to do all that. (Ngā Taumatua Teacher 8, Time 2)*

An additional general question at Time 2 asked, ***"How do you think your ideas might have changed?"*** This proved to be a very sensitive question revealing as noted above that Ngā Taumatua teachers were well aware of what they now knew, but also where they might have (relative) gaps. In addition they reflected on the growth of their knowledge.

> *I'm more informed. I feel as though I can justify what I'm doing and I can see more clearly, rather than just guess. Guess and hope I think that's what they call it. For a start I struggled. I had my thesaurus, my dictionary. .....And now I hear myself talking about something that's cognitively, blah blah blah. I have gained, I have I've really gained. I'm so thrilled. I started off, I'll tell you anyway. I started off I got my Bs, couple of Bs, next two were there was a little plus, and the last one had an A with a minus.....And reading back in my essays, I can see I've developed. There's a flow and I've learnt to link. (Ngā Taumatua Teacher 7, Time 2)*

This comment came from a Ngā Taumatua Teacher who did not have the formal qualifications of the other Ngā Taumatua teachers.

The commitment to and curiosity about research was evident in most of the Ngā Taumatua teachers' comments:

> *It would be nice to think that collectively we're going to continue to work in research, in this area. It's given us all a bit of confidence. (Ngā Taumatua Teacher 2, Time 2)*

Other comments referred to how their new ideas have meant they see needs for professional development for teachers

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[4] It is presumed that Ngā Taumatua graduates are being referred to here.

I've changed my stance in terms of our teachers back in the Kura. In my assignments I appeal to people like Professor xxx etc to provide some form of professional development for our teachers in the Kura, on things like bilingual education, theories. They have to learn the theories so that they can understand the purpose and the rationale for their being there and what they are doing. And helping them to understand, you know, the advantages of bilingualism and equipping them to, to equip the teachers so that if there is an area of contention, say from parents, or Ministry people, who say well what's the purpose of this. At least they will have the knowledge which will give them confidence to stand up for the kaupapa. (Ngā Taumatua Teacher 6, Time 2)

The course appears to have provided a strong context for the acquisition of the appropriate expert knowledge tapped here by the end of the course. All of the 8 Ngā Taumatua teachers scored above 2.9 across these eight dimensions. In general, knowledge at the beginning of the course was associated with knowledge at the end of the course ($r_s = 0.636$; $p<.05$), although the variability around this was noticeable. For example, Ngā Taumatua Teacher 6 as well as having the lowest knowledge score on entry made the greatest gain in knowledge to an average of 3.5. As noted earlier there was little evidence for relationships between level of qualifications or experience in teaching and knowledge at time 1 and this was the case at the end of the course also. These patterns reinforced the summary offered above that the course provided an effective instructional context, not determined by entry levels.

DISCUSSION AND IMPLICATIONS

This first study in this research report set out to answer one question. This is summarized below with implications that we have drawn for research and practice.

In study 1 the question addressed entailed an evaluation of one aspect of the Ngā Taumatua programme, the acquisition of professional knowledge. The evaluation concluded that the programme was associated with a marked development of knowledge in ways that map on to the emphases built into the programme. This suggests significant knowledge transfer, a hallmark of interventions that have a sustainable impact (Coburn, 2003). This was further indicated by the weak relationship between entry qualifications and level of knowledge at the end of the programme. The Ngā Taumatua teachers were particularly strong in areas to do with planned and evidence-based interventions, with teaching in the context of bilingualism, and with the significance of home-school partnerships. These are areas carrying important policy implications. A recent Best Evidence Synthesis on relationships concludes that the influences of families/whānau and communities are identified as important influences on high quality outcomes for diverse children (Biddulph, Biddulph, & Biddulph, 2003).

There was no evidence that the perspectives present at the beginning of the course, which drew on concepts from kaupapa Māori and tikanga Māori, were compromised. If anything the evidence suggests these strengthened and were integrated into deep professional knowledge. Thus, the in-depth academic and professional knowledge was effectively integrated with Māori concepts of teaching and learning. This demonstrates that these areas of knowledge are not necessarily in conflict, and further reinforces arguments about the need for both in effective instruction with Māori students (Bishop et al., 2001).

In the knowledge base the need for further learning was in the areas of writing assessment and relationships between reading, writing and oral language. The levels of knowledge by the

Ngā Taumatua teachers here reflect the levels of knowledge generally, in that less is known about effective assessments in writing and in the relationships amongst oral and written uses both theoretically (see Snow et al., 1998) and professionally (see Literacy Task Force, 1999). That is, across English medium contexts less is known in research terms and in terms of professional development about these areas. Currently there is considerable emphasis in research and development in English medium regarding writing (Literacy Task Force, 1999). Several implications can be derived:

- The Ngā Taumatua programme appears to be constructed as a very effective vehicle for developing highly knowledgeable professionals.

- There is need to develop professional and research knowledge in areas of early literacy teaching and learning; particularly in the teaching and learning of writing and assessment tools for the early stages of writing in Te Reo Māori. The programme could be improved by deliberately building practicum and research requirements which targeted these areas. More generally, there is an urgent need for funded research to develop research-based knowledge in these areas.

Study 2: Best Practice in literacy instruction

The second study aimed to describe and analyse patterns of teaching and learning in literacy – good practice in Y0-Y1 Māori medium classrooms.

In many countries, designing more effective literacy instruction for children from diverse cultural and linguistic backgrounds has become an imperative given the increasing diversity in school populations (Ball, 2002). The challenge to educators is especially pressing in schools serving the poorest communities. However, the history of educational endeavors for children, traditionally positioned as 'minorities', whose home language may not be that of the schools and who live in communities with limited access to economic and political resources, is not very positive (Snow et al., 1998; Literacy Task Force, 1999). Nevertheless, meta analyses of teaching effects and of effective interventions in instruction, even in contexts that have traditionally been seen as extremely limiting, have demonstrated that teachers can make a considerable difference to achievement patterns with estimates of teacher effects from 16 – 60% of student achievement (Alton-Lee, 2003; Hattie, 2002). So detailed knowledge of effective teaching in the context of diversity is greatly needed (Darling-Hammond, 1998).

In Māori medium instruction there exists the general professional and academic challenge of knowing what good practice looks like and being able to enhance effective teaching across Kura (Rau, 1998). But the need to do is made more pressing in the context of a significant challenge in diversity that teachers in Kura face. It is the challenge of children coming to school with a variety of skills in and control over the language of instruction, Te Reo Māori, as well as a range of skills and control over English. an analysis by Māori researchers who identified different groups of children on entry to school who ranged from strong in Te Reo Māori and relatively strong in English, through to children who had limited control over either Te Reo Māori or English (Berryman et al., 2001). There are significant theoretical and policy issues in knowing whether and how early instruction can add to the overall kaupapa of building Te Reo Māori at the same time as providing quality literacy instruction which enables high achievement in succeeding years at the kura.

A claim can be made for the significance of fine tuned and focused literacy activities as developmental sites for language acquisition. This comes from a view of learning and development as co constructed through instructional activities (Rogoff, 1995). The effectiveness of joint instructional activities depends on the development of shared understanding of goals and ways of participating, and tutorial features which guide expertise for performing (McNaughton, 2002). From this theoretical base, it is possible to argue that the language needed for those activities might be acquired within those activities as parts of the required expertise and ways of performing. In the process children come to acquire, use and extend aspects of the classroom language, either boosting one of their languages already developing or at an early stage of their acquisition of English as their second language.

The potential significance of classroom activities for language learning is signaled in research on early literacy development in family and preschool settings. There is ample evidence for the significance of joint activities such as reading to children and shared writing for developing language (Whitehurst & Lonigan, 2001). The research also demonstrates effects on aspects of receptive and expressive language including vocabulary and complexity of utterances, given activities that promote extended and elaborated talk (Biemiller, 1999; Dickinson & Tabors, 2001; Gelman, Coley, Rosengren, Hartman, & Pappas, 1998; Whitehurst & Lonigan, 2001). It also stresses the developmental properties

of the activities such as the significance of repeated opportunities to engage in activities and the shifts in the tutorial features that enable children to develop awareness and control over aspects of language.

In addition to the potential significance of activities per se, different classroom literacy activities are likely to provide different sorts of opportunities for exposure to, and use of language. Again, the emergent literacy research provides some support for this claim. A number of studies have shown that reading to children can take several forms, depending on the goals of the readers (McNaughton, 1995) and of the sorts of texts selected for reading (Gelman, et. al., 1998). Some forms create more opportunities for extended talk in language exchanges than others (Dickinson & Tabors, 2001).

In school classrooms where more formal instruction takes place these differences in the language features in activities are likely to be exaggerated. McNaughton (2002) introduces the concept of activities having the property of versatility. When activated in real time some activities are relatively versatile, through the forms they take and the roles of participants. They provide space for children's voices to be heard as well as extended talk. Against this positive aspect is the possibility for teacher dominance and limited understanding in the face of too much complexity or openness.

Other activities are relatively fixed in the form they take and the roles required of participants. The fixedness has a positive aspect as well as a problematic aspect. A powerful base for specific language forms might be created from the very predictable formats within which language forms are repeated and highly synchronized with referents (e.g. in a text with the following "Here is a cat." "Here is a dog." "Here is a horse"). On the negative side, few opportunities for incidental learning and learning to integrate across activities might occur with highly focused tasks.

A recent research-based intervention took place in early childhood centres and schools serving the poorest communities in New Zealand, in which there were high numbers of Māori and Pasifika children. Literacy achievement levels in the schools were typically very low after one year of instruction (McNaughton, Phillips & MacDonald, 2003). The two groups of teachers participated in a professional development programme designed to increase their effectiveness in enhancing early literacy development. The programme was highly effective, raising children's progress in beginning literacy to more closely approximate national expectations after a year at school (Phillips, McNaughton & MacDonald, 2004). The theoretical framework predicted that language use could be built in joint activities, in which text selections were carefully made and in which there was highly focused teaching to develop shared understanding and precise guidance for participation through the interaction patterns. Teaching could foster reciprocal relationships between reading and writing on the one hand and oral language on the other.

The data support these views in two ways. High achievements in literacy occurred at 5.6 years despite low English language levels on entry to school. Secondly it was shown that language levels (both receptive and expressive language) increased with the intervention – benefiting from both what early childhood teachers did as well as what primary teachers did.

A subsequent intensive study described five children and five teachers at two schools of the schools involved in that project (McNaughton, Farry, Barber, MacDoanld & Airini, 2003). Video recordings of the core literacy activities were intensively analysed for instructional and language properties. The five children (Three Tongan, one Samoan and one Niuean) were incipient bilinguals, whose home language was not English and had come from an immersion Pasifika early childhood education centre. They had a range of English literacy and language skills on entry to school but were generally low compared with known national averages on these measures. They had a range of skills in their home

language. After a year at school they had made progress consistent with the progress that had been made by children in the earlier research-based intervention.

The analyses explored how the literacy activities were able to provide sites for language acquisition for the children. The research-based intervention had shown that children developed English language skills at the same time as the rapid development in literacy in English. The effect of instruction provided too early may be interfering with literacy learning in English.

The core instructional activities were found to provide an impressive amount of language input estimated to be more than 9,000 words per week, and the children produced many words across the activities, estimated to be 750 words per week. The measures indicated varying features of complexity of input and use across activities. The activities systematically provided different patterns of exposure to and uses of language. The variability was largely determined by goals and the interactional structures around those goals. As platforms for language use it was found that instructional activities depended on conditions such as appropriate selection of 'rich' texts, which allow children's language and topics, as well as their nascent and emergent knowledge to be incorporated into the activity.

As mentioned previously, the second study aimed to describe and analyse patterns of teaching and learning in literacy in Y0-Y1 Māori medium classrooms. In this section we describe the Kura, and Kaiako that took part in this study; we describe the design and analyses of this study; and we detail the measures used to provide descriptions of instructional/ teaching practices in Māori medium classrooms. The overarching question is to describe quality literacy teaching in the context of diversity in skills in Te Reo Māori on entry to school.

METHODOLOGY

Māori medium kura and kaiako

Ngā Kura

Māori medium sites were to be selected known to reflect current best practice in literacy instruction in Māori medium. A network sample based in the knowledge of local schools by Ngā Taumatua teachers backed up with a triangulation procedure was designed to identify sites in which language and literacy outcomes for children are generally high (similar to the procedure adopted by Bishop et al., 2001). The original intention was to have the Ngā Taumatua teachers select a total of 10 sites (where they worked with Kaiako) with up to 5 new entrant children which would provide up to 50 children followed over four terms. The numbers of teachers at each level would vary across the sites, but assuming 2 teachers in each of the sites teaching children in this age range, that would mean 20 teachers in the total sample.

This process was only partially successful. While a number of teachers were identified (fewer than the number of Ngā Taumatua teachers), some of these teachers and schools were unable to participate. There were several reasons. Four teachers cited multiple pressures early in the school year, and three teachers moved positions both within and outside of schools. Further approaches were made both by Ngā Taumatua teachers and independently by the research team, to a number of Māori medium schools. The original intent was modified to have teachers selected who were recognised by professional colleagues as having good practice. One implication of this change to selection was that an analysis of characteristics of the teaching as they might be related to the work of the Ngā Taumatua teachers was not possible.

Because of these changes, there were Kura not from areas where Ngā Taumatua teachers were working and there were areas where Ngā Taumatua teachers were working from which we did not have Kura. The final group of Kura were from Murihiku – Invercargill, Te Upoko o te Ika – Wellington and Te Tai Tokerau. There are 4 Kura (i.e. 3 Kura Kaupapa Māori, 1 Māori Immersion medium).

Ngā Kaiako

At the beginning of the study with new entrant Tamariki, we observed 5 Kaiako in their classrooms. The previous teaching experience of the Kaiako in this study ranged from 1 year to one who had 45 years experience. All the Kaiako in the study had a Diploma of Teaching. While most of these teachers had a Bachelor of Education, some of these were in the process of upgrading their qualifications to a Masters in Education. Four of these Kaiako reported having taught in mainstream during their career, 1 having taught only in Rumaki Reo then shifting to Kura Kaupapa Māori, and 2 having only taught in Kura Kaupapa Māori. One Kaiako had lectured in Early Childhood Education at a recognised Teacher Training institution for eight years up until her current position. All of the Kaiako were female. The design (see below) entailed a second set of observations after a year. However, due to a career change by one Kaiako and 3 shifting up to senior levels in the Kura, the study was completed with 3 Kaiako (only one of whom had been in the original 5).

Te Reo Māori is the language used in the Kura in this study for all curriculum areas. To effectively teach children in these Kura, Kaiako need fluency in Māori, and an extensive Māori vocabulary. In this study the Kaiako's experience in the language is significant. Two were first language speakers of Te Reo Māori and 5 had learnt Māori as a second language.

Design

A short term longitudinal design was used. At time point 1 process data, i.e., observations of instructional practices were collected for teachers of 5.0 year old students. After four terms, when children were 6.0 years of age, the teacher groups were followed up and observations were repeated.

Classroom Observations

The design provides a limited developmental description of teaching with children over the age range 5.0 years to 6.0 years. At each time point analyses can be made of how classroom literacy activities might promote oral competencies, and how oral competencies are incorporated into literacy activities. The short term longitudinal descriptions mean that aspects of language, literacy and instructional practices at one time point can be related to aspects of language, literacy and instructional practices at a second time point. This provided correlational type descriptions of how skills at one point relate to skills at a second, and how instructional practices might be related also (see Study 3).

Observations were taken of the classroom reading and writing instruction. Kaiako were asked to carry out a typical session and we wanted to observe and record this typical session. Each session was observed in the classroom as part of the regular day's activities. Teachers were given no instruction other than to continue their normal program. All sessions were videotaped for later transcription. The aim was to have a record of the core literacy activities the kaiako used in the classrooms which would then be transcribed and systematically analysed for instruction.

In Study 2 described here we report on the description of classroom activities. Our aim was to describe and analyse patterns of teaching in literacy, with a view to understanding how the activities provide vehicles for children with a variety of levels of bilingual skills learn both language and literacy.

Instructional practices of the Kaiako

Rau (1998) and Bishop et al., (2001) describe core instructional practices (for Māori medium settings) that, in some respects, are like instructional approaches in mainstream settings. Both suggest that approaches of reading texts to children (shared reading), instructional reading of texts (guided reading), language experience as a preparation for writing and guided writing of texts take place. The concept of core here is that these text-based activities provide the basic textual activities for learning to read and write. The research question in the present study is how these (text-based activities) are used to increase the oral competencies of students. Other complementary instructional activities, such as teaching letter-sound correspondences, may focus on specific components and relationships that children learn and which feed into these core activities.

A number of more general programmes involving different forms and continuation of these core activities have been described (Bishop et al., 2001) and there are systematic analyses of the best known and research-based of these programmes - Tatari, Tautoko, Tauawhi; and Hei Awhiawhi Tamariki ki te Pānui Pukapuka (e.g., Atvars, Berryman, Glynn, & Walker, 1995; Bishop & Glynn, 1992; Ministry of Education, 2001). The measures of instruction in the present study reflect this focus on core practices (approaches) and the concern to analyse relationships with both literacy learning and language development (see below).

Observations

In order to describe and analyse patterns of teaching and learning in literacy, descriptions of core instructional activities in literacy in the Y0-Y1 Māori medium classrooms took place.

Across the Kura, four distinct classroom instructional activities were observed at both Time 1 and Time 2: Instructional Reading (guided reading), Reading To (shared reading), Instructional Writing (guided writing), and Shared Writing (language experience as a preparation for writing). These are defined in the following section.

At Time 1, the observational instructional data come from four Kura with five teachers. During Time 1 Reading To was not observed at Kura (D). The teacher in this Kura was a first year teacher who was still unsure of the difference between an Instructional Reading and Reading To activity. Subsequently, at Time 2, this teacher had moved up a level to teach Year 1-2 children in the Kura.

At Time 2, four teachers from the five target teachers at Time 1 were no longer teaching in these classrooms. The most common reason for this was a conscious shift up into senior teaching positions and/or to other levels within the school. One of the four teachers made a complete career change.

These changes influenced the total number of observations of the instructional program at Time 2. At Kura B the target teacher was new and inexperienced choosing not to be observed for the study. At Kura D, the target teacher was a first year teacher in a Reliever position, awaiting Full-time appointment in the Kura. No instructional observations were made here. While we have a Reading To observation from Kura C, other unexpected activities happening within the Kura and its community arose (discussion about school closures), and we were not able to observe further sessions. Kura A had two new but experienced teachers in our target classrooms who participated in all observations. Consequently, at Time 2 we have one Teacher from Time 1 remaining and participating where it was practicable, two new teachers in our target classrooms who did not participate, and two experienced teachers both new to Time 2, who participated.

Classroom Activities Defined

The four observed classroom instructional activities identified above are described below (Instructional Reading, Reading To, Instructional Writing, and Shared Writing). In addition, introduction sessions for a number of the activities were examined and are included as these are what the teachers used to introduce the children to the main activities.

Introduction to Instructional Reading

Instructional Reading was preceded by an introduction. In this introduction the teacher often paid attention to the language structures in the text. Such an introduction orientates the child to the text and reduces the possibilities of what the semantic structure can be (Clay, 1993). As the introductory phase had distinct aims it was predicted that it would take on a different interactional form from the instructional reading guidance phase. Therefore, in the following analyses the 'Introduction' was separately examined from the 'Instructional Reading'.

Instructional Reading

Instructional Reading was where specific guidance takes place. Children received guidance in accurately and fluently reading texts. This often happened in a small group where the children typically had responsibility for reading aloud what was written in the text but with the support of the teacher. Usually the aim was accurate fluent decoding using and integrating the multiple sources of information in the written language of the text.

Reading To

Reading To was an activity in which the teacher read a text to children and interacted around the meaning of the text. Often the teacher took responsibility for what was said and supported the child in learning how to search for the author's semantic intent. The specific nature of the teacher's and children's interactions depended on the text type.

Introduction to Writing

There was an introductory phase to Instructional writing. Similar to the introduction to Instructional Reading. During the introduction the teachers paid attention to the language structures in the text to be written. The guidance provides a basis for getting the words on to the page through highlighting components of words.

Instructional Writing

The guidance parallel to Instructional Reading also occurred in Instructional Writing. This activity often focused on helping children transcribe unknown words given the meaning of a collaboratively constructed statement. Typically the teacher took responsibility for getting or providing the structure and for writing much of the statement.

Shared Writing

There was an introductory phase to Shared Writing.; similar to the introduction to Instructional Reading. This often included modeling of sentences. Shared writing was focused on helping children search for, find, and capture in linguistic form "small themes" and significant moments – in the

children's life. Shared writing typically involved teacher and child developing one sentence or more around these themes or topics.

Measures

The detailed analyses described below required transcripts of the interaction during each of these activities. Thus, in order to develop descriptions of patterns of teaching and learning (types of interactions and language used) in core classroom instructional activities in literacy each observation session was transcribed verbatim into Māori by a fluent speaker of Te Reo Māori on the research team and then translated into English for the purposes of coding. Checks were made on the accuracy of the interpretation by comparing analyses in English of specific interactions with analyses in the original Te Reo Māori. In the transcript excerpts below we also provide the original verbatim transcript alongside the translation.

As outlined below, first we examined classroom language and then we examined the specific instructional language used in the instructional activities.

Classroom language

Total words for each observation session by both teacher and child were calculated. A number of studies show that one of the determinants of language acquisition is sheer amount of input (e.g., Hart & Risley, 1995). In addition, acquisition is also effected by the quality of the language exposure (Hart & Risley, 1995). Aspects of the quality of the language heard and used were estimated from measures of different words occurring and the rates at which different words occur given the total number of words. The latter is expressed as a type: token ratio. The closer to a score of 1.0, the higher density of new words in that a score of 1.0 means every word is a new word in that transcript. Therefore, both different (new) words used and the type-token ratios of words used were calculated. Further, the language in each session was separated into teacher or child language, and conversational speech, or speech directly from the classroom text (underlined text) in order to check possible differences in language exposure coming directly from texts and from teachers.

Interactional language

In order to determine the types of guidance that teachers were using during the specific classroom activities each transcript was then coded according to a set of interactional measures: Exchange type (which included Item, Sound, Performance, and Narrative), Strategic Focus (Awareness and Incorporation), Talk-related strategies (Extended and Elaborated), Questions and Instructions, and Feedback (positive or corrective).

This coding was developed in a previous study of teaching with new entrants in mainstream English medium classrooms. This study involved teachers in decile 1 schools teaching Pasifika children with varying degrees of incipient bilingualism (McNaughton et al., 2003). The coding in that study drew on well established dimensions of quality teaching, for example, feedback (Hattie, 2002), types of exchanges (McNaughton, 1995) and their focus (McNaughton, 2002) and extended and elaborated talk (Cazden, 2001; Dickenson & Tabors, 2001). Their applicability to Māori medium settings was largely unknown. However, the work of Bishop et al., (2001) and Rau (1998) suggested the general categories would be appropriate in that they could be predicted to carry instructional force for literacy learning and for language learning in classrooms.

All coding was completed by a trained observer, following three sessions in which the codes were developed and pilot tested to levels of acceptable inter-observer agreement.

Descriptions and examples of the language and literacy measures are provided below.

Teacher-Child Exchanges

 Exchanges were defined as a set of interactions which took place around the same topic. Three types of exchanges were identified which were mutually exclusive (Narrative, Item, and Performance). A fourth type of exchange could occur with any of these exchanges and was focused on sounds (Exchange of Sound).

Narrative Exchange -   Interactions which involve questions, comments, and evaluations about the story, as well as connections between the child's experiences and the text.

> E.g.   Instructional Reading:
>
> *C:*   *Kia tupato*
> *T:*   *He aha ai?*
> *C:*   *Na te mea he tio*
> *T:*   *Tiotio*
> *C:*   *Tiotio*
> *T:*   *Āe*
>
> C: Be careful
> T: Why?
> C: Because it's prickly.
> T: Prickly.
> C: Prickly.
> T: Yes.

Item Exchange -   Interactions which involve a question, a response, and often an evaluation. More often than not, the questions involved are of the display type; that is, the teacher already knows the answer.

> E.g.   Instructional Reading**:**
>
> *T:*   *Kei hea te mea ingoa o te pukapuka?*
> *C:*   *(Flicks title)*
> *T:*   *Korero mai, kei hea?*
> *C:*   *kei kona*
> *T:*   *Āe, he aha, kei raro, kei wāenganui, kei hea, kei?*
> *C:*   *Kei runga*
> *T:*   *Ka pai.*
>
> T: Where is the title of this book?
>
> *C:*   *[Flicks title]*
>
> T: Tell me where
> C: Over there.
> T: Yes, what below, in the middle, where, over?
> C: At the top.
> T: Well done.

Performance Exchange - A model, or partial model, is given by the teacher and a response is gained. The child may either complete the text or sentence given, or imitate the teacher speech.

E.g.   Instructional Reading**:**

T: Kua hāere rātou ki hea?..........Kua hāere rātou ki......
C: Ki te moana
T: Ki te moana

T: Where have they gone?..........They have gone to…..
C: To the ocean.
T: To the ocean.

Sound Exchange - Teacher comments, questions, explanations, or feedback regarding sound letter analysis or hearing sounds in words.

E.g.   Instructional Writing**:**

T: Ta, ta, kōrero mai, ta
C: Ta
T: Āe, kei te rongo koe I te?
C: T
T: Te 't'. Rawe!

T: Ta, ta, say ta.
C: Ta.
T: Yes can you hear the…..?
C: 'T'.
T: Te, 't'. Excellent!

Strategic Focus

Awareness Focus - Teacher comments, questions, explanations, or feedback which explicitly draw attention to the relevance of the child's knowledge or reflection on knowledge, to the rules of participating, and to the purpose or ways of participating.

E.g.   Instructional Reading**:**

T: He aha te tohu tēnā? Ka kite koe tēnā? Ahua iti ne? He Piko?
C: Piko

T: What is that symbol? Can you see that? Small isn't it? A comma?
C: Comma.

Incorporation - Frequency of overt connection with topics, events, and concepts familiar to the child. An attempt by the teacher to make direct links between the text being read and the child's experiences.

E.g.   Instructional Reading**:**

T: Pēnā ko koe te ngu, ko oma koe ki to Papa me to Māmā?
C::   Āe
T: Ne .... ko oma koe ki to Papa me to Mama?.....Peheātu koe (child's name)?

T: If you were the ngu, would you run to your father and mother?
C: Yes.
T: Really…..will you run to your father and mother?…….What about you *[Child's name]*?

Talk-Related Strategies

Extended Talk - Conversation which is sustained over several turns, utterances, or sentences, on a topic that allows the child to represent another place or time.

       E.g.   Instructional Reading**:**

C: *Te Pāpaka*
T: *Kei hea te pāpaka? Hāere koe te rapu te pāpaka.*
C: *(Raises up from her seat and points to the Pāpaka)*
T: *Menemene mai ana te pāpaka?*
C: *Āe*
T: *Kei hea tana māngai, kei hea tana māngai menemene?*
C: *(Returns to point to the smile)*
T: *Āe, kia ora koe*

C: The crab.
T: Where is the crab? You go and find the crab.
C: [Raises up from her seat and points].
T: Is the crab smiling?
C: Yes.
T: Where is his mouth? Where is his smiling mouth?
C: [Returns to point to smile].
T: Yes, thank you.

Elaboration - Each instance where a word or phrase was explained, illustrated, or commented on before or after reading a word, section, or the whole text.

       E.g.   Reading To**:**

T: **Ko ngā wāewāe o te pēpi, e hiahia ana ki te whānau tuatahi. Ko te mea tika ke, me huri te matenga,** *ko te matenga o ngā pēpi katoa o te ao, e whānauhia tuatahi ana, engari taua pēpi nei, a Whe, te pēpi a Hineamaru, ko āna wāewāe ke, kua puta. Kua raruraru te pēpi ne?*

T: **The feet of the baby wanted to come out first. The correct thing is the head must turn.** The heads of every baby in the world must come out first. But this baby Whe, the baby of Hineamaru, his feet instead came out. The baby was troubled wasn't he?

Instructions/Questions

     Questions and instructions given by the teacher were recorded. These could be directed toward the target child, or directed to the whole group or another particular child in the group.

       E.g.   Instructional Writing**:**

T: *Kei te hikoi. He aha te timatanga Hikoi*
C: *(Points to letter 'h')*
T: *Rawe, māku e tuhi……Kei te hikoi au ki….Kii mai, kimihia te timatanga o 'k'.*

T: Walking. What is the beginning letter of walking
C: [Points to letter 'h'].
T: Excellent. I will write……I am walking to…..Tell me, find the beginning of 'k'.

Feedback

Teacher feedback was defined as teacher responses contingent on a child action or verbal contribution. Feedback was separated into positive Feedback, which served to support or affirm the child's response or statement, and corrective Feedback, which served to correct the child's response or direct them toward the correct response.

E.g. Shared Writing**:**

T: *Hei aha, he pai ēnei hu mo te aha?*
C: *Hikoi*
T: *Hikoi, āe*
C: *Oma*
C: *Kaore he oma*
C: *Āe*
T: *Oma, ka tāea engari, kāre e tino tere. Ka hikoi. Hāere ki te mahi, na, me mau ana wēnei hu*

T: What are these shoes good for?
C: Walking.
T: Yes, walking.
C: Running.
C: [Another child says, "Not for running"].
C: Yes.
T: You can run in these, but not very fast. Walk. Going to work, these shoes are worn.

RESULTS

The aim of Study 2 was to describe and analyse patterns of teaching and learning in literacy in Y0-Y1, looking at good practice in Māori medium classrooms. In this section we describe the findings (patterns of teaching and learning in literacy) at two time points: at Time 1 when children in these Māori medium classrooms were 5.0 years of age and one year later at Time 2 when children were 6.0 years of age.

As mentioned in the Methodology, across the Kura, four distinct classroom activities were observed at both Time 1 and Time 2: Instructional Reading, Reading To, Instructional Writing, and Shared Writing.

At Time 1, the observational instructional data come from four Kura with five teachers. At Time 2 changes in teachers and classrooms influenced the total number of observations of the instructional program resulting in observations from 2 Kura and 3 teachers, only one of whom had been observed at Time 1.

Language During Instructional Activities

Data from classroom instructional practices provided a means of assessing complexity of word use. The transcripts of the instructional activities in the classroom were used to examine conversation during instructional activities.

Total words for each observation session by both teacher and child were calculated and then this total was separated into conversational speech (conversation), or speech directly from the classroom text

(reading text). This gave us an indication of the contribution of the teacher's language and the language in the text for children's language.

Table 3 and 4 below show the total conversation and text words used by teachers and children during each of the four observed classroom activities at Time 1. From Table 3 we can see the large variation in total words used in sessions by each of the 5. Not surprisingly given the structure of early reading texts we can see from the table that most of the words were part of conversational speech as opposed to words taken directly from the text. This indicates that the primary source of teacher language in these activities was what the teacher added to the text. Table 4 shows that there was also considerable variation in the amount of words used by children during the observation sessions, and unlike their teachers, children did not consistently use more words in conversation speech than words used from the text. This is especially evident with the children of teachers 3 and 4 who used considerably more words from their text generally during Shared Writing than words in conversation.

Table 3.   Average Total Conversation and Text Words of Teachers at Time 1

	Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5	Means
Instructional Reading						
Conversation	435	1769	1268	906	184	912.4
Reading Text	8	155	80	0	7	50.0
Reading To						
Conversation	228	1282	244	370	n/a	531.0
Reading Text	23	40	496	39	n/a	149.5
Instructional Writing						
Conversation	1140	1376	576	849	116	811.4
Writing text	24	53	18	11	0	21.2
Shared Writing						
Conversation	925	1068	692	562	168	683.0
Writing text	16	114	170	144	0	88.8
TOTAL	2799	5857	2944	2881	468	

Table 4   Average Total Conversation and Text Words of Children at Time 1 (Means Per Teacher)

	Kura A Teacher 1 (4 children)	Kura A Teacher 2 (4 children)	Kura B Teacher 3 (4 children)	Kura C Teacher 4 (7 children)	Kura D Teacher 5 (4 children)	Means
Instructional Reading						
Conversation	7.8	141.3	55.5	77.9	6.0	57.7
Reading Text	13.8	27.8	52.0	13.6	10.3	23.5
Reading To						
Conversation	12.0	136.3	6.0	9.0	n/a	40.8
Reading Text	22.0	1.5	0.0	43.9	n/a	16.9
Instructional Writing						
Conversation	60.3	52.0	34.5	12.4	10.0	33.8
Writing text	1.5	18.0	9.0	2.1	0.0	6.1
Shared Writing						
Conversation	31.3	56.8	84.3	22.7	34.5	45.9
Writing text	3.8	27.3	334.0	122.4	0.0	97.5

Table 5 and 6 show the total conversation and text words used by teachers and children during each of the four observed classroom activities at Time 2. Similar to Time 1, the teachers at Time 2 showed

variation between activities in the amount of words used and most of the words used were part of conversational speech as opposed to words taken directly from the text. The children also showed a similar pattern to those children at Time 1. Overall, it appears the amount of language use was similar across times, although there was some indication that the amount of child language recorded had increased (to the extent that a snapshot at one time with a small number of kaiako can show this).

Table 5.   Average Total Conversation and Text Words of Teachers at Time 2

	Teacher 4	Teacher 6	Teacher 7	Means
Instructional Reading				
Conversation	n/a	817	1349	1083.0
Reading Text	n/a	1	44	22.5
Reading To				
Conversation	2060	881	376	1105.7
Reading Text	101	135	28	88.0
Instructional Writing				
Conversation	n/a	571	1609	1090.0
Writing text	n/a	88	6	47.0
Shared Writing				
Conversation	n/a	531	537	534.0
Writing text	n/a	48	163	105.5
TOTAL	**2161**	**3072**	**4112**	

Table 6.   Average Total Conversation and Text Words of Children at Time 2

	Kura C Teacher 4 (5 children)	Kura A Teacher 6 (4 children)	Kura A Teacher 7 (4 children)	Means
Instructional Reading				
Conversation	n/a	42.0	213.3	127.7
Reading Text	n/a	52.8	0.0	26.4
Reading To				
Conversation	50.8	28.3	39.0	39.4
Reading Text	0.0	120.3	27.0	49.1
Instructional Writing				
Conversation	n/a	24.5	94.8	59.6
Writing text	n/a	0.0	33.3	16.7
Shared Writing				
Conversation	n/a	63.8	56.3	60.0
Writing text	n/a	0.0	0.0	0.0

As mentioned previously, aspects of the quality of the language heard and used can be estimated from measures of different words occurring and the rates at which different words occur given the total number of words. The later is expressed as a type: token ratio. The closer to a score of 1.0, the higher the density of new words in that 1.0 means every word was a new word.

Tables 7-10 below show the average different (new) conversation words and text words used by teachers and children at Time 1 and by teachers and children at Time 2 and Tables 11-14 show the type:token ratios for teachers and children at Time 1 and then at Time 2 .

The results indicate that teachers used a high number of new words at Time 1 and increased the number at Time 2. Similarly, children increased the use of new words from Time 1 to Time 2. In

addition, many more new words appeared in conversational format than in the texts the children read or were read to children. The density of new words to total number of words was highest in the conversational format at both times also. Overall, the density of new words used in literacy activities by both Kaiako and Tamariki increased over the course of the year.

Table 7.   **Average Different Conversation and Text Words of Teachers at Time 1**

	Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5	Means
Instructional Reading						
Conversation	151	278	179	184	65	171.4
Reading Text	2	18	19	0	5	8.8
Reading To						
Conversation	91	258	138	129	n/a	154.0
Reading Text	14	19	196	24	n/a	63.3
Instructional Writing						
Conversation	250	220	149	236	51	181.2
Writing text	18	14	15	10	0	11.4
Shared Writing						
Conversation	204	212	195	88	63	152.4
Writing text	7	18	54	67	0	29.2
TOTAL	**737**	**1037**	**945**	**738**	**184**	

Table 8.   **Average Different Conversation and Text Words of Children at Time 1**

	Kura A Teacher 1 (4 children)	Kura A Teacher 2 (4 children)	Kura B Teacher 3 (4 children)	Kura C Teacher 4 (7 children)	Kura D Teacher 5 (4 children)	Means
Instructional Reading						
Conversation	6.0	55.8	27.8	25.7	4.0	23.9
Reading Text	5.3	9.8	8.0	11.4	5.8	8.1
Reading To						
Conversation	9.0	64.3	4.5	6.4	n/a	21.1
Reading Text	9.5	1.5	0.0	24.1	n/a	8.8
Instructional Writing						
Conversation	35.3	31.8	22.3	9.3	7.0	21.1
Writing text	1.5	5.0	5.5	1.9	0.0	2.8
Shared Writing						
Conversation	16.8	32.3	28.3	16.4	23.3	23.4
Writing text	3.5	17.0	62.3	65.3	0.0	29.6

Table 9   **Average Different Conversation and Text Words of Teachers at Time 2**

	Teacher 4	Teacher 6	Teacher 7	Means
Instructional Reading				
Conversation	n/a	256	255	255.5
Reading Text	n/a	1	29	15.0
Reading To				
Conversation	399	230	121	250.0
Reading Text	66	15	17	32.7
Instructional Writing				
Conversation	n/a	198	288	243.0
Writing text	n/a	35	6	20.5
Shared Writing				
Conversation	n/a	197	163	180.0
Writing text	n/a	15	0	7.5
TOTAL	**465**	**947**	**879**	

Table 10.   Average Different Conversation and Text Words of Children at Time 2

	Kura C Teacher 4 (5 children)	Kura A Teacher 6 (4 children)	Kura A Teacher 7 (4 children)	Means
Instructional Reading				
Conversation	n/a	30.3	108.5	69.4
Reading Text	n/a	14.0	0.0	7.0
Reading To				
Conversation	27.8	17.0	29.0	24.6
Reading Text	0.0	15.0	9.0	8.0
Instructional Writing				
Conversation	n/a	19.5	26.3	22.9
Writing text	n/a	0.0	19.0	9.5
Shared Writing				
Conversation	n/a	37.5	34.0	35.8
Writing text	n/a	0.0	0.0	0.0

Table 11.   Type-Token Ratios for Conversation and Text Words of Teachers at Time 1

		Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5
Instructional Reading						
	Conversation	2.9	6.4	7.1	4.9	2.8
	Reading Text	4.0	8.6	4.2	0.0	1.4
Reading To						
	Conversation	2.5	5.0	1.8	2.9	n/a
	Reading Text	1.6	2.1	2.5	1.6	n/a
Instructional Writing						
	Conversation	4.6	6.3	3.9	3.6	2.3
	Writing text	1.3	3.8	1.2	1.1	0.0
Shared Writing						
	Conversation	4.5	5.0	3.5	6.4	2.7
	Writing text	2.3	6.3	3.1	2.1	0.0

Table 12.   Average Type-Token Ratios for Conversation and Text Words of Children at Time 1

		Kura A Teacher 1 (4 children)	Kura A Teacher 2 (4 children)	Kura B Teacher 3 (4 children)	Kura C Teacher 4 (7 children)	Kura D Teacher 5 (4 children)
Instructional Reading						
	Conversation	1.3	2.1	2.1	3.0	1.0
	Reading Text	2.5	2.6	6.8	1.2	1.8
Reading To						
	Conversation	1.4	2.0	1.4	1.4	n/a
	Reading Text	2.3	1.0	0.0	1.8	n/a
Instructional Writing						
	Conversation	1.5	1.7	1.6	1.3	1.4
	Writing text	0.3	3.6	1.5	1.3	0.0
Shared Writing						
	Conversation	2.2	1.7	3.0	1.4	1.5
	Writing text	1.1	1.6	5.4	1.9	0.0

Table 13.   Type-Token Ratios for Conversation and Text Words of Teachers at Time 2

		Teacher 4	Teacher 6	Teacher 7
Instructional Reading				
	Conversation	n/a	3.2	5.3
	Reading Text	n/a	1.0	1.5
Reading To				
	Conversation	5.2	3.8	3.1
	Reading Text	1.5	9.0	1.7
Instructional Writing				
	Conversation	n/a	2.9	5.6
	Writing text	n/a	2.5	1.0
Shared Writing				
	Conversation	n/a	2.7	3.3
	Writing text	n/a	3.2	0.0

Table 14.   Average Type-Token Ratios for Conversation and Text Words of Children at Time

		Kura C Teacher 4 (5 children)	Kura A Teacher 6 (4 children)	Kura A Teacher 7 (4 children)
Instructional Reading				
	Conversation	n/a	1.4	1.9
	Reading Text	n/a	3.8	0.0
Reading To				
	Conversation	1.9	1.7	1.3
	Reading Text	0.0	8.0	3.0
Instructional Writing				
	Conversation	n/a	1.3	1.8
	Writing text	n/a	0.0	1.6
Shared Writing				
	Conversation	n/a	1.7	1.5
	Writing text	n/a	0.0	0.0

Summary of classroom observations - Language during instructional activities

Tables 3 - 14 provided measures of oral language occurring during the instructional activities. The measures firstly are of words that are actual text words and words that are additional to the text (referred to in the tables as 'conversation'). Summing across the core activities at Time 1 the children spoke on average 321 words, either as text words or as additional conversational words, and they heard from their teachers an average of 3,246 words. At Time 2 the children each spoke an average of 379 words and heard from their teachers 4,075 words.

Many more words were heard and spoken in conversational format than from the texts, which is not surprising given the controlled and simple vocabulary used in the texts for reading.

These figures generally indicate that instructional activities were sites where receptive and expressive language acquisition could occur. There are few theoretical or research-based ways to judge the significance of these opportunities. But there is a previous study of Pasifika children (who were incipient bilinguals) entering mainstream English medium classrooms that used the same analytic approach (McNaughton et al., 2003). The classrooms were known to be associated with rapid

acquisition of oral and written English. An estimate of language input using the same observational procedures with core instructional activities at 5.0 years was 3047 words from teachers and the children spoke 265 words. These seem to be largely comparable inputs and uses. Given such a comparison is appropriate, it seems predictable that the text-based activities would contribute significant inputs and practice effects for the children's language development.

The quality of the language was also checked using the indicator of different and new words, and their density in the speech samples. The results indicate that teachers used high numbers of new words at Time 1 and increased the number at Time 2. Similarly, children increased the use of new words for Time 1 to Time 2. Many more new words appeared in conversational format than in the texts the children read or texts that were read to the children. The density of new words to total number of words was highest in the conversational format at both times also. Again, there is little information with which to judge the significance of these results. However, they are comparable to the patterns found in the mainstream English medium classrooms in the study described above (McNaughton et al., 2003).

Instructional language

After the classroom language coding each transcript was then coded according to the following language and literacy measures: exchange type (which included item, sound, performance, and narrative), strategic focus (awareness and incorporation), talk-related strategies (extended and elaborated), questions and instructions, and feedback (positive or corrective).

All coding was completed by a trained observer, following three sessions, in which the codes were developed and pilot tested to levels of acceptable inter-observer agreement. The following section provides results and analysis for the coding at both Time 1 and Time 2, as well as examples of each of the variables coded for. (See Appendix 2, Tables 25-32 for Time 1 and 33-39 for Time 2 that show the amount and types of instructional language used by each of the teachers during the observed classroom activities on which the descriptions below are based).

Time 1

The analysis of exchanges provides a means of describing the instruction of intent. Was it to develop skills and knowledge related to items of knowledge such as letters (Item exchanges); or related to the narrative properties of texts such as event, characters, ideas (narrative exchange); or related to an accurate performance (Performance exchange)? The strategic focus on awareness is aimed at children developing capabilities of reflecting on and monitoring their performance and focus on incorporation is when the teacher draws on background cultural and linguistic knowledge. Other attributes such as questioning and feedback provide further information on known instructional properties, and the analysis of strategic talk indicates the degree to which exchanges included developed language interactions significant in classroom language learning.
Introduction to Instructional Reading

Of the four types of exchanges coded, Item exchanges (typically involving questions, responses and evaluations) seemed to predominate during this initial phase of Instructional Reading (mean = 9.8), with all other types of exchange largely absent (only 10 others evident across teachers). The other major instructional features were Questions/Instructions, and Positive Feedback, both of which were evident for all four teachers, although slightly lower for Teacher 4. The Awareness focus appeared a small number of times for Teachers 1 and 3. Talk related strategies, however, played a very minor role, with only one instance of extended talk across all four teachers. (See Appendix 2, Table 25).

Item Exchange (Teacher 1)
T: [Returns to book showing picture of girl adding butter]

Kei te purua te kotiro he aha kei roto i te kohua inaianei?
C: [Raises hand]
          Pata
T: He pata. Kei ahau he pata
T: [Returns to book showing picture of girl adding butter]
          What is the girl putting into the pot now?
C: [Raises hand]
          Butter

T: Butter. I have some butter.
Questions/Instructions (Teacher 3)

T-C: Kei hea te mea ingoa o te pukapuka?

C: (Flicks title)

T-C: Kōrero mai, kei hea?
C-T: kei kōna
T-C: kei raro, kei wāenganui, kei hea, kei?
C-T: Kei runga

T-C: Ka pai.
T: Where is the title of this book?

C: [Flicks title]

T: Tell me where.
C: Over there.
T: below, in the middle, where…..?
C: At the top.
T: Well done.

Positive Feedback (Teacher 2)

T: Āe, he aha to kupu?
C: Kaanga pako
T: Kaanga pako
          Kei te kai ia, kaanga pako?
C: Āe
T: Ne, tika koe, tika koe

T: Yes, what is your word?
C: Popcorn.
T: Popcorn. She is eating popcorn?
C: Yes.
T: Really, you are right, you are right.

Instructional Reading

Item exchanges remained high in this section (mean = 14.4), however they seemed to drop off completely for Teacher 1. There was a noticeable shift towards the use of Performance Exchanges when children initiated or completed parts of words or larger sections of text (mean = 14.4) and an Awareness Focus (mean = 14.8), with both these variables being used equally as often on average as

Item Exchanges. For example, Teacher 2 and Teacher 3 both evidenced a marked increase in their use of performance exchanges from the introduction to the session itself. There was also a marked increase in the use of Corrective Feedback – mainly by Teachers 2 and 3. (See Appendix 2, Table 26).

Item Exchange (Teacher 3)

> *T-C*   *Taikaha, he aha te tangi o te taikaha, t*
> *C-T:*   *T*
> *T-C:*   *T*
> *T-C:*   *Ko t, kua timata te taikaha, te kupu taikaha*

> T: Tiger, what is the beginning sound of the word 'tiger'?
> C: 'T'.
> T: 'T'. Tiger begins with the letter 't', the word 'tiger'.

Performance Exchange (Teacher 2)

> *T-C:*   *Na, he aha te ingoa o tōu tātou pukapuka, ngā?*
> *C-T:*   *Kākahu tika*
> *T-C:*   *Ngā*
> *C-T:*   *Kākahu tika*

> T: Okay, what is the name of our book? The……?
> C: Correct clothing.
> T: The…..?
> C: Correct clothing.

Awareness Focus (Teacher 2)

> *T-C:*   *Tēhea te aha i te mutunga?*
> *C:*   *Ira kati*
> *T-C:*   *Ira kati*
>   *Pānui mai me tōu ringa*

> T: What goes at the end of a sentence?
> C: Full stop.
> T: Full stop. Read to me and use your finger.

Introduction to Reading To

The Introduction to Reading To had a similar pattern in the use of instructional strategies as was evident in the introduction to Instructional Reading. Again, the only type of exchange, to play a major role, was the Item Exchange (although it must be noted that this was due to the behaviour of Teacher 2 alone). Teachers 1 and 3 did not show any use of any one of the four types of exchange. The pattern at Time 2 was also similar to Time 1 by the presence of only a small number of examples of focus on Awareness (again due largely to the behaviour of Teacher 2). A small number of Questions/Instructions and Positive Feedback also featured (means = 18.7 and 5.0 respectively), but these were small in number and again dominated by Teacher 2. (See Appendix 2, Table 27).

Item Exchange/Awareness Focus (Teacher 2)

T: (Points to beginning of line)

Na, ka timata au ki kōnei, kātahi ka hāere au ki whea ki te pānui, ka hāere pēhea?

Ka hāere pēhea tāku ringa, ahau e pānui ana?

Ka timata ki?

C: (Stands to take pointer and points to correct place)
T: Ka pai. Ki kōnei ne? Kātahi, ka hāere ki ….. ki whea… tāku reo pānui?
C: (Directionality correct)

T: *Āe, ka timata, ka hāere ki kōnei, ka pēnei*
         (Moves pointer across text)
         Ne? I ahau e pānui ana

T: [Points to the beginning of the line]
Now I will begin here, then where do I read? How do I go?
What do I do with my finger when I read?
C: [Stands to take pointer and points to correct place]
T: Well done. Here isn't it? Then, go….where…..when I read?…
C: [Directionality correct]
T: Yes, begin. I go here like this.
         [Moves pointer across text]
         Is that right? When I read?

Reading To

The pattern for exchanges was similar to that of the introductory part of this session, with still little evidence of the use of exchanges other than the Item Exchange. Moreover, this use of Item Exchange appears to again be dominated by Teacher 2 totalling more Item Exchanges than all other teachers added together. There was, however, greater evidence of talk related strategies (i.e. Extended Talk and Elaboration). It seems evident (see Appendix 2 Table 28) that Questions/Instructions in this section are closely related to both Item Exchanges and Awareness Focus (at least for Teachers 1 and 2). (See Appendix 2, Table 28)

Extended Talk (Teacher 3)

T: **Ka rongo ngā tamariki tona reo. Ka kata ratou. Kaua e kata tamariki ma,**
         me awhina ke tatou i a Manu, te kii a Whāea Kimiora.
         (Points to picture of Manu crying)
         Aoo, titiro, he aha tana āhua i tēnei wa?
C: *Kei te pouri*
C: *Kei te tangi*
T: *Kei te tangi, tētahi atu ahua mo tēnei tama*
C: *Pouri*
T: *Kei te tika koe…Kei te pouri tana ngakau. He aha ai, kei te pouri ia?*
T: *Kei te katakata ngā tamariki*

> T: The children hear her utterances. They laugh. "Children, don't laugh. We should help Manu," says Whāea Kimiora.
>
> *[Points to picture of Manu crying]*
>
> Look, what is her appearance now?
> C: Sad.
> C: Crying.
> T: Crying. Another description for this boy?
> C: Sad.
> T: You're right…….S/he feels sad. Why is s/he sad?
> C: The children are laughing.

Elaboration (Teacher 3)

> T: Ka hamama te waha o Manu. Ko te tangi i puta mai, ehara ko Te Reo teretere o te arewhana, engari, ko Te Reo reka o ngā Manu tioriori o te wao nui. Kāre ngā tamariki i kapu i o ratou taringa, ka whakarongo ratou.
>
> *Pehea ou koutou whakaaro, he aha ai i whakarongo ratou ki a ia?*
> *C:* *Na ngā manu*
> *T:* *He aha ai, kei te tino hiahia ratou ki te whakarongo ki a Manu?*
> *T:* *He kawa tonu tana waiata ki a ratou?*
>
> T: Manu's mouth opens. The sound, which comes forth, is not the trumpeting sound of the elephant, but the sweet resounding sound of the birds of the forest. The children did not block their ears. They listen.
> What are your thoughts? Why did they listen to her/him?
> C: Because of the birds.
> T: Why? Do they earnestly want to listen to Manu?……Is her/him singing still sour to them?

Introduction to Instructional Writing

Again the only type of exchange, which played a major role in this section, was the Item Exchange – although it must again be noted that this was largely due to the behavior of one teacher. This same teacher (Teacher 1) was responsible for the majority of focus on Awareness also. Again Questions/Instructions and Positive Feedback feature, with little to no use of Corrective Feedback. It should be noted that while Teacher 1's Questions/Instructions seem to relate to the use of both Item Exchanges and Awareness Focus, the Questions/Instructions of Teacher 4 do not relate in the same manner. (See Appendix 2, Table 29)

Item Exchange (Teacher 1)

> T: He aha te timatanga o pēpi
> C: P
> T: P. Pēpi
> T: What does 'baby' begin with?
> C: 'P' ['Baby' translates 'Pēpi']
> T: 'P'. Baby.

Awareness Focus (Teacher 1)

> T: *He aha te timatatanga?*
>
> C: *I*
> T: He i kei roto, tika koe. He aha kei te timatanga?
> C: *T*
> T: *T*
> T: What is the beginning?
> C: 'I'.
> T: There is a 'i' inside, you are correct. What is at the beginning?
> C: 'T'.
> T: 'T'.

Instructional Writing

There was a shift in this section towards the use of Sound Exchanges, although this increase was slight. Positive Feedback remains high – although Teacher 5 only displays two instances of this, as do Questions/Instructions (especially for Teacher 2).   (See Appendix 2, Table 30)

> Performance Exchange (Teacher 2)
>
> T: *Pānui mai*
> C: *(Nil response)*
> T: *He*
> C: ***He***
> T: *He hu*
> C: *(Pointing 1-1)*
>   ***He hu, na (ingoa o te tamaiti)***
> T: *Read to me.*
> C: *[No response]*
> T: *The……*
> C: ***The***.
> T: *The shoes…….*
> C: *[Pointing one to one]*
>   ***The shoes by [Child's name]***.

Sound Exchange (Teacher 1)

> T: *Wha..re Äta whakarongo ki ngä pu kei te rongo koe? He aha ano koe kei te*
>   *rongo? Wha..re*
> C: *Wh*
> T: *Ka pai*
>
> T: Wha…re. Listen carefully to the letters you can hear? What else can you hear?
>   Wha….re.
> C: Wh.
> T: Well done.

Introduction to Shared Writing

While all introductory sessions so far have provded evidence of Item Exchanges as the primary type of exchange adopted, the introduction to Shared Writing shows a slightly greater use of Sound Exchanges (mean = 7.0, compared to means of 1.0, 0.7, and 0 in other introductory sessions). Positive

Feedback and Questions/Instructions remain somewhat lower (with the exception of Teacher 2) than in the introductory sections of other sessions. (See Appendix 2, Table 31)

Sound Exchange (Teacher 2)

> *T:*   *He aha te pu tuatahi o te kupu k, k, kanikani?*
> *C:*   *K, k, kiwi*
> *T:*   *K, k, Kanikani.*
> *T:*   *What is the first letter of the word k…k…kanikani?*
> *C:*   *K….k…kiwi.*
> *T:*   *K…k…kanikani.*

Shared Writing

A similar pattern emerges for Shared Writing with evidence of a small number of all types of exchanges. Note that Teacher 4 shows the only instances of both Extended Talk and Elaboration in this section. The use Awareness Focus is evident, mainly by Teachers 1, 2, and 3. (See Appendix 2, Table 32).

Extended Talk (Teacher 4)

> *T:*   **Hoki tātou e ki te moana ua hoki ki te moana**
>   *Hia ana rātou ki te kai i ngā ika?*
>
> C: Because they don't have any niho
>
> *T:*   *Whai niho ana rātou, aoo, āe, ngaungau ana.*
>   *He aha te take kore rātou e kai?*
>
> C: Cos they are …… e hāere mai ki te hopu
> T: Ki te hopu i a rātou. I te wa e rere ana rātou ki te moana, e rere horo ana te hāere rerea. ….Kore rātou e kai, kore rātou e kai, te take, me hāere tereti tonu rātou ki te moana
> T: Let us return. Let us return to the ocean.
>   They have returned to the ocean. Do they want to eat the fish?
> C: Because they don't have any teeth.
> T: They've got teeth. Oh yes they are biting. What is the reason that they don't eat?
> C: Cos the people……are coming to capture.
> T: To capture them? During the time they are journeying to the ocean they are swimming quickly…..They do not eat because they are journeying quickly to the ocean.

Elaboration (Teacher 4)

> *T:*   **Hoki tātou e, Hoki tātou e ki te moana**
>   *Ko wai wēnei e hoki ana ki te moana?*
>
> T: Let us return. Let us return to the ocean.
>   Who are these returning to the ocean?

Time 2

Introduction to Instructional Reading

Only one of the three teachers (Teacher 7) interacted with children in an introductory section. There were ten exchanges by this teacher during the introduction to Instructional Reading, seven of which are Performance Exchanges. There were almost no instances of talk related strategies; that is Extended Talk and Elaboration. There was however, evidence of Questions/Instructions. Both types of Feedback were also evident – although slightly more of the positive type. (See Appendix 2, Table 33).

Instructional Reading

All types of exchange were evident for Teacher 7, while Teacher 6 used only Item and Performance Exchanges. Focus related strategies are evident for both teachers, with a mean of 4.0 for Awareness Focus and a mean of 6.5 for Incorporation. Extended Talk and Elaboration were also evident for both teachers, although Extended Talk was slightly smaller in number. Questions/Instructions were high – especially for Teacher 7. The amount of Positive Feedback was similar for both teachers, while Corrective Feedback was mostly evident by Teacher 7. (See Appendix 2, Table 34).

Awareness Focus (Teacher 7)

T:	Te kupu taputapu. Kāre he tohu tō. Whakakorehia te tohu to. Kōrero ināianei.
C:	tāputāpu
T:	Kao. Kaua e pērā. Ano
C:	tāputāpu
T:	Aoo, kotiro ma, tiro mai. Kāre he tohu tō. Nōreira me pēhea te pānui? Taputapu. Kōrero
C:	Taputapu
T:	Taputapu
C:	Taputapu
T:	Āe. Kia ora
T:	The word 'taputapu'. There is no macron. Erase the macron. Say it now.
C:	Utensils.
T:	No not like that. Again.
C:	Utensils.
T:	Oh girls look. There is no macron. So how should we read it? Utensils. Say it.
C:	Utensils.
T:	Utensils.
C:	Utensils.
T:	Yes well done.

Incorporation (Teacher 7)

T:	Kei te pēhea te whiira o Pāpa? Ki ōu whakaaro?
C:	Kei te pirangi ia ki te kiihi tōna Moko
T:	Engari, ka kiihi tōu Pāpā i a koe, ka pēhea tōu whiira?
	Pēhea tōu kare-a-roto?
	Pai?
C:	Āe
T:	Āe
C:	He kino
T:	He kino te kiihi a Pāpā ki a koe?
C:	Āe
T:	How are Papa's feelings? To your mind?
C:	He wants to kiss his grandchild.
T:	But when your Papa kisses you, how do you feel? How are your emotions?
	Good?
C:	Yes.
T:	Yes.
C:	Bad.
T:	Is it bad when Dad kisses you?
C:	Yes.

Elaboration (Teacher 7)

C:	**He anga kina**
T:	Ka pai. Hurihia
C:	**He anga kutai**
T:	Kei hea ngā kutai?
C:	(Points to kutai)
T:	E hia ngā anga kutai?
C:	**A sea-egg shell.**
T:	Well done. Turn the page.
C:	**A mussel shell.**
T:	Where are the mussels?
C:	*[Points to kutai]*
T:	How many kutai shells are there?

Extended Talk (Teacher 7)

C:	**Anga. pipi**
T:	Ka pai, kei hea ngā pipi?
C:	(Points to pipi)
T:	Kei hea te kainga o ngā pipi?
	Kei roto I te?
C:	(Points to sand)
T-C:	He aha tēnei? Kiri…..Kirikiri ne?
C:	(Nods to affirm)
T-C:	Pērā tōu rua-kirikiri

C: **Shell. Cockles.**
T: Well done. Where are the cockles?
C: *[Points to pipi]*
T: Where is the home of the cockles? In the…..?
C: *[Points to sand]*
T: What is this? Sand isn't it?
C: *[Nods to confirm]*
T: Just like your sand pit.

Introduction to Reading To

In this section of Reading To very few exchanges were evident. There was, however, some evidence of Questions/Instructions, which seem to be of the Awareness Focus type (particularly for Teacher 6). The only type of feedback, which played a substantial role, was Positive Feedback by Teacher 6. (See Appendix 2, Table 35).

Questions/Instructions (Teacher 6)

T: Nōreira, i te tuatahi, ka tāea e koutou te whakaatu mai, kei whea te taitara, ne?
Te taitara o tēnei pukapuka. He aha te ingoa o tēnei pukapuka?
C: **Te Pūkeko**
T: **Te Pūkeko**. Kei whea, e kii ana taua kupu, aua kupu?
Ka pai, kia ora.

T: Firstly, are you able to show me where the title is? The title of this book. What
is the name of this book?
C: **The Pūkeko.**
T: **The Pūkeko.** Where does it say that word, those words? Good, thank you.

Positive Feedback (Teacher 6)

T: He aha taua tohu? He aha tōna ingoa? He?
C: Ira Kati
T: ***Ira Kati, rawe!***

T: What's that sign? What is it called? A…?
C: Full stop.
T: Full stop, wonderful.

Reading To

There was a definite increase in the use of exchanges. Particularly Item Exchanges, which increased from a mean of 1.5 to a mean of 11.3. The pattern of Awareness Focus did not change much except for a moderate increase for Teacher 6. Elaboration was now evident, although still not for Teacher 6. Questions/Instructions and Positive Feedback remain relatively high, especially for Teacher 4. Corrective Feedback features although only a small number of this type of feedback is evident. (See Appendix 2, Table 36).

Item exchange (Teacher 4)

    T: He aha te mea tapahi i a ia, he aha te mea i tapahi, he naihi
    C: He toka, he toka koi
    T: He toka koi. Te aha atu? He toka kohatu?
    C: He pounamu?
    T: He pounamu? Āe

    T: What did they cut her with? What did they use to cut? A knife?
    C: A rock, a sharp rock.
    T: A sharp rock. What else? A rock? A stone?
    C: A glass.
    T: A glass yes.

Awareness Focus (Teacher 6)

    T: Mōhio ana koutou te tikanga o tēnei rārangi kei kōnei? (Macron)
              (Points to macron then looks to Ch)
              He aha te tikanga o tēnā? Ka pēnei te ahua na
              (Writes both ū and u on whiteboard)
              Kite ko? Ētahi wa ki runga, ētahi wa, kare he rārangi ki runga ne?
              Me aha ahau ina ka kite ahau i tēnei rārangi ki runga nei?

    T: Do you know the significance of this line here?

              [Points to macron then looks to children]

              What is its purpose? It looks like this.

              [Writes 'ū' and 'u' on whiteboard]

              Do you see? Sometimes it's on top. Sometimes there's no line on top. What should I do when I see this line on here?

Elaboration (Teacher 4)

    T: **Ko ngā wāewāe o te pēpi, e hiahia ana ki te whānau tuatahi. Ko te mea tika ke, me huri te matenga.** Ko te matenga o ngā pēpi katoa o te ao, e whānauhia tuatahi ana, engari taua pēpi nei, a Whe, te pēpi a Hineamaru, ko ana wāewāe ke, kua puta. Kua raruraru te pēpi ne?

    T: **The feet of the baby wanted to come out first. The correct thing is the head must turn.** The heads of every baby in the world must come out first. But this baby, Whe, the baby of Hineamaru, his feet instead came out. The baby was troubled wasn't he?

Instructional Writing

It should be noted that of the two teachers observed, neither teacher carried out an introduction before their Instructional Writing session. There was a marked difference in these two teacher's use of exchanges. While for Teacher 6 there were only two exchanges, Teacher 7 implemented 61 exchanges – predominantly Item, Sound, and Performance Exchanges. There was little use by either teacher, however, of narrative exchanges. While Awareness Focus, Questions/Instructions, and Positive and

Corrective Feedback were evident for both teachers, the use of these was again markedly higher for Teacher 7. (See Appendix 2, Table 37).

Item Exchange (Teacher 7)

> T: He aha tēnei?
> C: Ra
> T: Āe, kei hea te kupu ra?
> C: (Points to correct kupu)
> T: Āe
>   Kei hea te oro o te r?
>   Kei hea te oro?
> C: (Points to correct oro)
> T: Ka pai ke koe
>
> T: What is this?
> C: Sun.
> T: Yes, where is the word sun?
>
> *C: [Points to correct kupu]*
>
> T: Yes. Where is the sound of the 'r'? Where is the sound?
>
> *C: [Points to correct oro]*
>
> T: You are correct.

Performance Exchange (Teacher 7)

> T: Aoo, kei te Ngāro kotahi ne, ko te h me te?
> C: I
> T: Āe, kei hea te i?
> C: (Locates correct)
> T: Āe, Kia ora ki a koe
>
> T: Oh one is missing isn't it? The 'h' and the…….?
> C: 'I'.
> T: Yes, where is the 'i'?
>
> *C: [Locates correctly]*
>
> T: Yes, thank you.

Sound Exchange (Teacher 7)

> T: Mehemea, kare he tohu to mo te 'a' ka tangi te 'a'……Korero mai 'a'
> C: a
> T: engari ka tohu to, ka pehea?
> C: Ā
> T: Rawe, ano
> C: Ā

> T: If there is no macron for the 'a', the sound of the 'a'……. say 'a'.
> C: 'A'.
> T: But if there is a macron, how then?
> C: 'Ā'.
> T: Excellent, again.
> C: 'Ā'.

Introduction to Shared Writing

Only one Teacher (Teacher 7) was represented in this section. There was little to no use of any of the variables measured, with perhaps the exception of Questions/Instructions. (See Appendix 2, Table 38).

Shared Writing

There was a slight increase in Teacher 7's use of exchanges, Questions/Instructions, and Feedback. Both Positive and Corrective Feedback were evident for both teachers (with means of 30.5 and 6.0, respectively). (See Appendix 2, Table 39).

Positive Feedback (Teacher 6)

> C: Tuhi pikitia
> T: I ta pikitia, āe!
>   I mahi koe etahi kowhaiwhai me te?(pauses)
> C: Ika
> T: Me te ika, katahi whakapiri ai ki runga I te pepa pango ne?
> C: Āe
>   (Turns to show T – displayed in akomanga)
>   Kei kora!
> T: Āe

C: Drew pictures.

> T: Drew pictures, yes. You did some scroll patterns and….?
> C: Fish.
> T: And a fish. And then stuck it on the black paper eh?
> C: Yes.
>
>   *[Turns to show Teacher. Displayed in akomanga]*
>
>   It's there.
> T: Yes.

Corrective Feedback (Teacher 6)

> T: (Begins writing story **I te ahiahi**)
> T: Te ahiahi …(writes) ahi ahi
> C: O te ahiahi
> T-C: I te ahiahi, I te mea, kua mahia kētia
> T: [*Begins writing story, **I te ahiahi**]*
> On the afternoon…..the afternoon.
> C: Of the afternoon.
> T: 'I' the afternoon because it's past. Past tense, the afternoon.

Summary of classroom observations – instructional language

The classroom observations show a number features of classroom teaching. The first is that at both time points the basic pattern of teaching involved high rates of questions focused on learning items such as letters and letter combinations in words, very often within the format of a classic 'IRE' sequence of a teacher **Initiation** – child **Response** – teacher **Evaluation** / feedback (Cazden, 2001). Given this format there was a high rate of feedback, a property of instruction known to impact on learning in the context of high quality programmes in English-medium classrooms (Hattie, 1999). There was a noticeable focus on enhancing children's awareness of concepts about print both specific to reading and writing in Te Reo Māori such as the use of the macron, as well as more general concepts such as full stops. This focus also was present early in the first year as well as after the first year of instruction. To the extent that it is valid to use these snap shots of instruction with different combinations of children and in some instances with different teachers it is interesting to note that Study 3 reports that the children as a group were most advanced in the area of Concepts About Print (average in the top quartile) and in word recognition (average in quartile three). Although they were in stanine two for the other measures including letter identification (see below for further reporting of child measures). The need to develop this awareness is strongly indicated in the developmental literature, so this appears to be an important strength (Whitehurst & Lonigan, 2001).

The rates of extended or elaborated talk appeared generally quite low in relationship to other types of interactions and this would be a potential limiting factor on the development of complex language forms judging from the research in English medium classrooms (Dickinson & Tabors, 2001). However, there was a shift to some extended or elaborated teacher and child talk in the core activity of reading to children (shared reading) and in instructional writing at both time points. These activities appeared to be more productive vehicles. These data on extended and elaborated talk need to be related to the earlier presentation of rates of using and hearing words presented above. This suggests, however, that children were in fact provided with many opportunities to hear and use specific words. This latter finding replicates other research showing how effective instructional practices in reading can provide a platform for language acquisition (McNaughton et al., 2003). But the findings on the low rates of complex interactions (extended and elaborated talk) suggest there were limitations on the input and production around complex language use in interactions. Overall, there were few instances of exchanges at either time point, in which interactions were focused on aspects of a narrative such as themes, or characterisation, or events. This means that purpose and guidance in the core reading and writing activities did not often explicitly involve developing understanding and strategies related to narrative meanings. Such interactions are strongly linked to the development of comprehension (Dickinson & Tabors, 2001). It is interesting to note that Tamariki found the narrative language task relatively difficult scoring lower on this measure than a more structured retelling measure (see below).

These data provide some answers to the question of how the teachers are able to provide instruction which enables children with different degrees of control over Te Reo Māori to develop the language needed. One answer focuses on the general level of input and production. As a whole, the core activities provided an impressive amount of language input and repeated opportunities for production with feedback. It is difficult to judge the possible significance of the input, estimated to amount to over 9,000 words per week from the core instructional activities (given they occurred three times a week), without comparative data tied to rates of acquisition. However, this overall input can be compared with Hart and Risley's (1995) longitudinal study of 42 American families (from a variety of

backgrounds). The average number of words addressed to children in an hour of interacting when the children were between 13 and 36 months, was 1440 words.

Similarly, children produced many words across the activities, estimated to be 1,000 words per week at Time 2 (given the activities were occurring three times per week). The importance of using language as a basis for testing and developing one's growing control of that language is a central mechanism in language learning (Pinker, 1999). But again, it is difficult to judge the possible significance of these particular opportunities. Thornbury (2002) recently summarised our knowledge of vocabulary learning in English as a second language context, and argued that effective learning depends on actions such as repetition (at least seven times over spaced intervals), retrieval, spacing of opportunities to use (i.e. distributed practice) and purposeful use (personalized used and the more meaningful the use the better). The children in these Māori medium classrooms had repeated opportunities within activities to use specific words and to a limited extent across activities.

This suggests the conditions Thornbury (2002) identified in part may be being well met for learning words. But demonstrating significance relies on further research, which would look at repetition across activities over time and ties these to acquisition. The implication for teaching would be to consider planning for repeated exposure and distributed practice of specific words through the selection of books for Instructional Reading and for Reading To children, as well as in the planning of language experience for writing.

Despite the sheer amount, the quality of the input is likely to determine how quickly and well children acquire language, and therefore the effectiveness of learning (Dickinson & Tabors, 2001). However, quality needs to be considered in relative terms, being determined by match with current levels of expertise (of children). The characteristics of an appropriate match, in terms of linguistic complexity, will depend on the level of the language system being considered.

The measures indicated varying features of complexity of input and use across activities. The density of 'new' words that teachers used (and these were defined only within this corpus) depended on the activity, but was around a new word every 2 to 5 words. For the children, there appeared to be a high density in conversation around texts, but a considerably lower density when they read texts.

Another way to look at quality of language for children was whether there were instances of Extended Talk and Elaboration, both processes known to be significant in educational contexts for learning language (Biemiller, 1999; Dickinson & Tabors, 2001). There were instances, but as noted above these were low rates and largely confined to Reading To children or, to a lesser extent the Instructional Writing. The partial limitation to these contexts reflects the purposes of the activities as described earlier. These activities were more to do with comprehension of text words and developing a language base to express ideas, than they were to do with decoding accurately, a central concern of Instructional Reading.

Thus, there was a good base for lexical learning. However, the proviso noted above is important, that the low rates of complex interactions (extended and elaborated talk) suggest there were limitations on the input and production around complex language use in interactions.

The picture that emerges from the analysis of activities and their components is that they systematically provided different patterns of exposure to and uses of language. For example, Reading To provided a context for more words, and more instances of Elaboration and Extended Talk. The

variability is largely determined by goals and the interactional structures around those goals as noted above. However, for the analysis here the question might be what does that variability provide in terms of conditions for learning language? The mean for the assessment of expressive and productive language (Kii Mai) at Time 2 was significantly higher than the entry level as was the conversational measure (Elicited Conversations), although at a lower level (see below for full reporting of these analyses). Similarly, numbers of words spoken during classroom activities were higher. This would be expected developmentally under conditions of first language acquisition for children entering instructional settings that matched family settings as monolingual settings. So it is important to note that indeed aspects of language use could be shown to develop over this time associated with the classroom programme.

DISCUSSION AND IMPLICATIONS

The second study aimed to describe and analyse patterns of teaching and learning in literacy, looking at good practice in Y0-Y1 Māori medium classrooms. The patterns are summarized below with implications that we have drawn for research and practice.

Patterns of teaching and learning Y0 to Y1 in Māori medium

In this study the research question was directed at how teachers effectively taught children who entered school with varying language and literacy profiles. There were substantial differences between teachers in the instructional patterns in the core activities of reading to children, instructional reading, language experience and writing and instructional writing. The basic pattern of teaching involved high rates of questions focused on learning items such as letters and letter combinations in words, very often within the format of a classic 'IRE' sequence (Cazden, 2001). There was a high rate of feedback, a property of instruction known to impact on learning in the context of high quality programmes (Hattie, 1999). There was a noticeable focus on enhancing children's awareness of concepts about print both specific to reading and writing in Te Reo Māori such as the use of the macron, as well as more general concepts such as full stops. This focus also was present early in the first year as well as after the first year of instruction. These emphases mapped on to the patterns of children's development in literacy described in Study 3. The research showed that the core instructional activities in reading and writing provided vehicles for language acquisition as well as literacy. The numbers of words and the quality of words both heard and used indicate that instructional activities were sites where receptive and expressive language acquisition could occur specifically at the word level. The rates were similar to another study which examined rates in mainstream English medium classrooms with known effectiveness in promoting English language acquisition for emergent bilingual children (McNaughton et al., 2003). The results suggest the following conclusions:

- Given well designed instructional activities, language acquisition and literacy learning can be mutually facilitative. Quality instruction with the varying profiles of children's language and literacy on entry to school would capitalise on the vehicles provided by core literacy activities.

- A sound literacy programme at the beginning of Māori medium schooling need not compromise the goals set for developing and revitalising Te Reo Māori.

- At 6.0 years, the teachers had not carried out running records to determine text levels; and this procedure should be embedded into good practice.

- There is a need to increase the complex language used by both teachers and children in the core literacy activities. While language components including words may be being learned very well, and new words are being acquired, complex language forms may be lagging behind and there are opportunities within the literacy activities (e.g., in Shared reading) to impact development. The low rate of narrative exchanges suggests a need to consider the use and extent of use of Reading To and Shared Writing in the core programmes as these are effective vehicles for complex language use.

- The research experience of selecting teachers in Māori medium schools raises some important issues for the work of Ngā Taumatua and for the selection and retention of teachers. The high turnover and shifts in levels and placement has several consequences. One concern is the continuity of learning experiences for children. More research is needed on the extent to which this might compromise their opportunities to learn. In the early years of literacy instruction familiarity with children and their background development over time is an important feature of quality teaching in English medium instruction (McNaughton, 2002).

Study 3: Language (Te Reo) and Literacy Development in Māori Medium

The aim of Study 3 was to develop descriptions of literacy and language development from Y0 – Y1 in children entering Māori medium classrooms. In this section we describe the Tamariki that took part in this study; we describe the design and analyses, we detail the measures used to provide descriptions of language and literacy development in Māori medium classrooms, and we describe the findings of these analyses.

Rau, Whiu, Thomson, Glynn and Milroy (2001) have provided a description of patterns of development in reading and writing for five-year-old children in Māori medium classrooms. Eight schools in South Auckland, North Waikato and Hamilton areas were involved. Four were Kura Kaupapa Māori, one was a Wharekura, one total immersion school and two total immersion units operating within a mainstream school. The schools were all low decile schools. Te Reo Māori was the sole language of instruction in the literacy programme. Assessments in reading, writing and oral language were conducted when the children first entered school (0-3 months) and then every 2-3 months until the children were 12-17 months in school. Approximately 100 children were assessed at each time point.

The assessment in reading was Ngā Pukete Panui Hāere (Running Records), with levels 1-10. After 0-3 months in immersion schooling 82% of children in the sample were reading at between level 1 and level 3 (Ngā Kete Korero level: Whenu Harakeke – Kete Harakeke E), with a mean level of 2, i.e., beginning reading. After 12 -17 months 82% of children in the sample were reading between level 2 and level 8, with a mean level of 4/5, i.e., moving toward fluency. There was a strong relationship between reading levels and letter identification and between reading level and word recognition.

The assessment in writing used samples of writing by children, with levels 1-4. At 0-3 months in school 80% of the children were at level 2 (Kete Harakeke). After 12-17 months in school 40% of children were at levels 3 or 4 (Kete Kie Kie, or Kete Pingao). The results also showed that there was a strong relationship between reading levels and writing like in English medium instruction.

The Oral Language assessment was a structured retelling task, Kii Mai (from Aromatawai Urunga-a-Kura: AKA; Te Tāhuhu o te Matauranga, 1999). This was carried out with 35 children. 18 of the children improved their scores over time, 15 did not, this included children who had reached ceiling. The improvement in Kii Mai was compared with improvements in reading, and there was variability, i.e. those children that made improvements in Kii mai did not necessarily improve in reading and vice versa. In addition, Rau et al. (2001) examined the oral language of early bilinguals to examine if there was a closer relationship between their oral language and reading. They found that after 4 months in school early bilinguals experienced more success in reading – the oral language advantage of the early bilinguals had positive effect on reading and writing. This hints at the direct link usually associated with success in oral language and success with other literacy activities, as in English medium.

Given the above findings we were interested in developing descriptions of literacy and language development from year 0 to year 1 in children entering Māori medium classrooms in a number of Kura throughout New Zealand. These descriptions address the question - given the range of scores on entry to school what are the patterns after one year at school in these Māori immersion settings? The descriptions also provide profiles of where the children are at in terms of literacy and language and can act as a guide for classroom instruction.

METHODOLOGY

Ngā Tamariki

In total across the Kura, 24 children were assessed at 5.0 years (see Table 15) and 16 of this total at 6.0 years (see Table 16). Although we refer to the children as 5.0 years and 6.0 years their ages were quite varied. We attempted to take the youngest children in the classrooms at each age, but in the interests of maximising the sample size this meant a large age range. The resulting group of Tamariki have a greater range of ages than originally intended. Of the total number of children, 11 were female and 13 were male. At Time 1, all children had an 80% - 100 % rate of attendance to Kura during the first school term of Kura. This changed slightly during Time 2 by the rate of attendance of 1 child dropping to 40% - 60%. All of the children in this study had Kōhanga Reo experience. This experience ranged from three to four years[5]. Three of the children are reported to come from homes where Māori was the main language spoken at home, 12 where Māori was the main language in a bilingual home context and 9 of the children come from homes where English was the main language spoken at home. Although this is the situation, Kaiako report that the number of homes where Māori is the main language in a bilingual home is increasing. There were no children who entered these classrooms with no access to Te Reo Māori.

Study 3 provides details of the control over Te Reo Māori these children had in the beginning stages of learning to read and write and after a year at school (see Table 17). Here two aspects of the descriptions can be noted. The first was the considerable range of control over Te Reo Māori on entry as others have noted (Berryman et al., 2001). Secondly, there was a noticeable growth in the quality measures of Te Reo Māori and literacy over the course of the year, providing some support for the claim that good teaching practice responds to language differences and supports oral acquisition simultaneously with literacy acquisition.

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[5] Nothing is known about the quality of the Kōhanga in terms of language and instruction. We accept that there will be variability across the children in what they had experienced.

Table 15.   Ngā Tamariki at Time 1

Child	Gender	Te Kōhanga Reo Experience a	Home Language e	Rate of Attendance i (Since entering)	Age at Test in years
C1	F	4	2	5	5:3
C2	M	4	2	5	5:6
C3	M	4	2	5	5:2
C4	F	4	2	5	5:1
C5	M	4	2	5	5:3
C6	M	4	2	5	5:3
C7	M	4	3	5	5:4
C8	M	4	3	5	5:4
C9	M	4	3	5	5:10
C10	M	4	3	5	5:8
C11	M	4	3	5	5:5
C12	M	4	1	5	5:7
C13	F	4	3	5	5:4
C14	F	4	2	5	5:6
C15	F	4	1	5	5:6
C16	F	3	2	5	5:5
C17	F	3	3	5	5:3
C18	M	3	2	5	5:2
C19	F	4	2	5	5:7
C20	F	4	2	5	5:8
C21	F	4	3	5	5:1
C22	M	4	3	5	5:1
C23	F	4	2	5	5:1
C24	M	4	1	5	5:1

a.   1 = 0 – 1 year,   2 = 1 – 2 years,   3 = 2 – 3 years,   4 = 3 – 4 years,   5 = 4 – 5 years
e.   1 = Māori Only,   2 = Māori mainly spoken,   3 = English mainly spoken,   4 = English only spoken
i.   1 = 0 - 20%,   2 = 20-40%,   3 = 40-60%,   4 = 60-80%,   5 = 80-100%

Table 16.   Ngā Tamariki at Time 2

Child	Gender	Rate of School Attendance i (First Term)	Age at Test in years
C1	F	5	6:1
C2	M	5	6:5
C3	M	5	5:11
C4	F	5	5:11
C9	M	5	6:10
C10	M	5	6:8
C12	M	5	6:7
C13	F	5	6:3
C14	F	5	6:5
C16	F	5	6:4
C17	F	5	6:1
C18	M	5	6:0
C20	F	5	6:7
C22	M	5	6:2
C23	F	5	6:2
C24	M	3	5:9

i.   1 = 0 – 20%,   2 = 20-40%,   3 = 40-60%,   4 = 60-80%,   5 = 80-100%

Design

A short term longitudinal design was used. At time point 1 literacy and language assessments were collected for 5.0 year old students. After four terms, when children were 6.0 years of age, the student groups were followed up and assessments were repeated.

Literacy measures

Standardised literacy measures (and research based profiles) currently available for the early years in Māori medium were used to develop descriptions of literacy and language development from Y0 – Y1 in children entering Māori medium classrooms. All assessments were carried out in Māori only. The assessments include those from Aromatawai Urunga-a-Kura : AKA (Te Tāhuhu o te Matauranga, 1999), and 5 sub tests of He Mātai Āta titiro ki te Tūtukitanga Mātatupu, Pānui, Tuhi (Rau, 1998). These assessments were specifically designed for use in Māori medium classrooms.

Ngā Tikanga O Te Tuhi Korero (Concepts About Print, CAP – Rau, 1998)

This test measures children's knowledge of different aspects of written texts such as the early strategies – directionality and one to one correspondence, and some language concepts such as back, front, letter and word. It has 24 graded items, the most difficult of which requires children to identify changes in word and letter order in sentences.

Te Tautu Reta (Letter Identification, LID – Rau, 1998*)*

This test gives measures of a child's ability to identify a letter by any means – by letter names, letter sounds or a word with the appropriate first letter sound. This test includes 33 Letters, both upper case and lower case and some alternative letter forms.

Te Whakamātautau Kupu (Word Test, WORD –Rau, 1998).

This test is based on a sampling of high frequency words from the child's reading vocabulary.

Whakarongo, Tuhia Ngā Tangi O Roto I Ngā Kupu (Hearing and Recording Sounds, H&RS – Rau, 1998).

This test samples children's phonological knowledge and the ability to record letters for the sounds heard. It uses a dictation procedure in which the tester reads out a sentence to be written and the child is encourages to write what he or she can hear in the words. An accurate response is worth one mark per sound (phoneme), with a total score of 41.

Te Tuhi Kupu (Writing Vocabulary, WRVOC – Rau, 1998).

The test measures writing vocabulary by recording the number of words able to be written by the child in ten minutes. Each correctly spelled word scores one point.

These assessments were used where appropriate and up to ceilings. All the above assessments were used when the children were 5.0 years and again at 6.0 years of age. Reading text levels were not available from any of the Kura, so measures of text reading were not employed at the new entrant and 6.0 year levels.

Language measures

In order to examine language development two measures of children's language (Te Reo Māori) ability were utilised, a retelling activity and an elicited conversation activity.

Retelling

There are a limited number of Te Reo Māori language measures available suitable for both entry to school and over the first year at school. Checklists for language (Te Reo Māori) competencies on entry to school are available (Rau, 2001; Rau et al., 2001; Berryman et al., 2001). A retelling assessment was selected for this project that would provide a sample of both receptive and expressive oral language related to literacy development at school. The Kii Mai language assessment procedure comes from the New Zealand Aromatawai Urunga-a-kura: AKA/SEA School Entry Assessment battery (Learning Media, 1999; this assessment was designed for use in Māori and English medium settings – AKA is specifically designed for Māori medium). This assessment was potentially able to be used at 6.0 years as well as on entry to school. It provides a measure of several aspects of children's expressive and receptive language. Children participate in listening to the tester read an unfamiliar story and then they retell it to an audience using the book. A total score out of 18 is provided based on sub-scores for comprehension, sentence complexity, vocabulary, organisation (story coherence), expression, and content (main points covered). The Tell Me assessment has been shown to have high reliability and validity in its English form (MacDonald & McNaughton, 1999).

Elicited conversation

An elicited conversation measure was used to extend the descriptions available from the Kii Mai assessment to a relatively unstructured language format. It might be that a less formal and more conversational format would provide a different picture of children's oral language than that provided by the formal and standardised nature of the Kii Mai assessment. A narrative starter was employed: *E hia ou tau?* How old are you? *I mahara koe I tōu ra huritau?* Do you remember your birthday (party)? *He keke huritau tāu? Pehea te momo keke?* Did you have a birthday cake? What type of birthday cake did you have? Where children could not identify with the starter topic, other narrative starters were employed. Ko wai tou hoa tino pai? Who is your best friend? He aha te take, ko ia to hoa tino pai? What is/are the reason/s he/she is your best friend?

The elicited conversation by the child was assessed using an adapted version of the Kii Mai scoring procedure, Whakawhānuitia te Hinengaro (see Appendix 1, Table 24). The Whakawhānuitia te Hinengaro assessment procedure comes from the Ngā Pae o te Māramatanga Whakawhānuitia te Hinengaro Project: Reading Comprehension Assessment. It has been developed to be used in across year 3 to year 8 in Māori medium settings. The total battery provides a measure of aspects of children's reading comprehension. Five separate components for assessment have been established and scoring of these separate components developed (see Hohepa, Williams, & Barber, 2004). The first of those components is Tārua (tia) (Retell). The ***elicited conversations*** measure used in the present study has been assessed using the Tāruarua component (Retell). *Tāruarua* assesses aspects of the major information-structure propositions *about* the conversational topic. Tāruarua is assessed under a framework comprised of three separate categories: Content, Sequencing and Te Reo Māori (grammar and structure) – each category has its own set of assessment criteria. A total score of 12 is reported, based on the minimum sub-score of 0 with the maximum of 4 for each category. These are shown and described in Appendix 1, Table 24.

RESULTS

The aim of Study 3 was to develop descriptions of literacy and language development from Y0 – Y1 in children entering Māori medium classrooms. In this section we describe the findings from these assessments on entry to school and at 6.0 years of age.

Children's language and literacy on entry to school

The characteristics of the children's language and literacy at Time 1 at 5.0 years and Time 2 at 6.0 years are shown in Tables 18 and 19. The assessments come from Aro Matawai Urunga-ā-Kura: AKA (Te Tāhuhu o te Mātauranga, 1999) and 5 sub tests of He Mātai Āta titiro ki te Tūtukitanga Mātatupu, Pānui, Tuhi (Rau, 1998). In addition, we have used a primed conversational format to elicit a language sample. Several conclusions can be drawn from these profiles of individual children on entry to school.

A wide range of language and literacy skills

On each of the measures children show wide variations. In the Kii Mai assessment (see Table 18) this range was from a score of 7 to a score of 15. In the guidelines for Kii Mai a score of 7 indicates that a child has not used language competently in this activity. The child is at an early stage of using this type of language and will require special support, with close monitoring, in each of the language areas in order to build confidence. A score of 15 represents a more advanced although possibly mixed profile in this activity with relatively high scores in one or more areas. Some common examples are:

- Relatively high comprehension and content, compared with low scores in one or two other areas;

- Relatively high sentence and vocabulary scores, compared with low scores in other areas;

- Relatively low organisation and description scores, compared with high scores in other areas.

Only 3 of the 24 children had scores of 7 indicating a need for special support; and one child had a score of 15. The bulk of the children, therefore, had what appears to be a common range of strengths and weaknesses.

Similarly, responses on the *Elicited conversations* measure (see Table 17) at Time 1, ranged from a score of 3 to a score of 9. These scores were significantly correlated ($r = 0.465$) with the Kii Mai assessment (see Table 19), although children had systematically lower ratings scores on the elicited conversations. One interpretation of this is that the more standardised format of the Kii Mai provided a structure for using language and the children were less familiar or comfortable with the more open conversational format in the elicited conversation. Child's age at testing was not significantly correlated with either of the language scores indicating specific language experiences were important rather than instruction for determining language skills.

Similar variation was apparent in the various literacy assessments (see Table 18), apart from the word recognition test. Children's concepts vary considerably (in the present case from 3 through to 20 concepts), as does letter knowledge (0 letters to 33 letters) and knowledge of sounds (0 sounds to 41 sounds). The word test is dependent on children developing a set of core words from beginning reading instruction so it is not surprising or unusual to have few words able to be recognised at the

beginning of school. Writing vocabulary also is very sensitive to beginning formal instruction in writing and there is a clear relationship with time at school. This variation is typical for new entrants in English mainstream schools (McNaughton, 1999) and carries the same implication for Māori medium; notably a need to accurately determine children's strengths and weaknesses in emerging literacy expertise.

In three instances, the age at testing, (see Table 15 and 16) was related to the mean scores of literacy measures, with correlations varying between *r* = .432 and *r* = .541 (see Table 19). This suggests that for CAP, WORD1 and Writing time at school was an important determinant of performance but this was not so for the other measures. The two lowest correlations with age at testing were for letter identification and hearing and recording sounds suggesting that the learning of these items had already been influenced markedly by other literacy experiences perhaps from Te Kōhanga Reo.

There were some notable exceptions to the general relationships with time at school; for example, child 1 and 4; and child 21 and 23 where higher or lower scores were not matched with length of time at school. This variation, in which some new entrant children are higher than older children in some areas, appears to be closely linked to the exposure to Te Reo Māori prior to entering Kura; as Table 22 indicates for these four children. Background data for these children indicate strong family commitment to the language and culture in the home. This included: family members committed to learn and use the language themselves; high levels of exposure to Māori language and cultural practices at home and in the community; and regular participation in extended family contexts where there were other strong language and cultural models, some of whom were likely to be native speakers of Māori. This variation has been noted in other reports (Kawea te Rongo, 2001). The four children illustrated here are part of a group likely to come to Kura with strong control over Te Reo Māori. Others have a range of control.

The implication of this for teachers is that children have a wide range of expressive and receptive language skills (in this format of retelling) and a wide range of literacy skills. Clearly there is a need to be able to plan and deliver effective literacy instruction in ways that both adjust to this variation and that build the language needed for teaching and learning.

Variation in individual profiles

The relationship between scores is shown in the first order correlations in Table 20. In general, the scores were highly inter-correlated as they are with English versions of the Observation Survey (Clay 2002). The correlations between Kii Mai / Tell Me and the literacy measures suggest that degree of control over Te Reo Māori was closely associated with acquisition of reading and writing in Te Reo Māori. In contrast, the elicited conversation was not associated with any of the literacy measures. This may mean that the combination of expressive and receptive dimensions measured by the Kii Mai assessment covered more areas of relationships between language and literacy. For example, hearing words and understanding their meanings which is tapped in the Kii Mai is likely to be related to phonological knowledge (Hearing and Recording Sounds) and also recognition of known words.

However, the correlations are below r=.05 and there are instances where children have strengths in one area but have less knowledge in another. For example, child 24 had relatively high alphabet knowledge but knew few sounds, and yet had a relatively high score on Kii Mai. Child 18 had a low score on Kii Mai but high scores on letter and sound knowledge and concepts about print.

The instructional implication of this is that teachers have to know and respond to the individual profiles to build knowledge and skills in relatively weak areas and capitalise of strengths.

Table 17. Language measures for all the children at Time 1 and Time 2

		Kii Mai		Elicited Conversations	
Kura	Teacher	Time 1	Time 2	Time 1	Time 2
A	1				
Child 1		12	15	9	12
Child 2		13	13	5	10
Child 3		8	11	8	8
Child 4		11	17	7	11
A	2				
Child 5		10	n/a	3	n/a
Child 6		10	n/a	3	n/a
Child 7		9	n/a	3	n/a
Child 8		9	n/a	3	n/a
B	3				
Child 9		11	12	8	11
Child 10		11	13	5	12
Child 11		8	n/a	5	n/a
Child 12		7	12	8	12
Child 13		7	10	5	12
C	4				
Child 14		10	15	8	12
Child 15		13	n/a	8	n/a
Child 16		10	13	4	10
Child 17		11	12	6	11
Child 18		7	10	4	8
Child 19		13	n/a	8	n/a
Child 20		15	16	8	12
D	5				
Child 21		13	n/a	7	n/a
Child 22		9	10	5	0^{a}
Child 23		12	15	9	10
Child 24		13	8	9	0^{a}
Total	*M*	10.58	12.63	6.17	10.79
	SD	2.19	2.5	2.14	1.42

Note: several children did not offer anything in response to the kii mai and elicited conversation task, i.e., "The child said nothing"

Table 18.   Literacy measures for all children at Time 1 and Time 2

Kura	Teacher	CAP		WORD		WRVOC		H&RS		LID	
		Time 1	Time 2	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2
A	1										
Child 1		12	18	0	7	1	13	10	33	13	29
Child 2		9	19	0	5	0	16	40	39	32	33
Child 3		10	14	0	39	1	11	1	4	3	32
Child 4		9	22	0	15	1	41	34	30	19	33
A	2										
Child 5		9	n/a	0	n/a	0	n/a	28	n/a	28	n/a
Child 6		10	n/a	0	n/a	1	n/a	21	n/a	6	n/a
Child 7		10	n/a	0	n/a	0	n/a	29	n/a	14	n/a
Child 8		10	n/a	0	n/a	1	n/a	13	n/a	6	n/a
B	3										
Child 9		12	17	1	12	2	22	1	39	7	27
Child 10		12	20	0	7	1	17	13	39	18	27
Child 11		9	n/a	0	n/a	0	n/a	0	n/a	0	n/a
Child 12		11	13	0	1	2	7	0	19	8	14
Child 13		12	20	0	12	2	17	29	39	22	29
C	4										
Child 14		17	20	15	15	34	43	40	41	33	33
Child 15		15	n/a	12	n/a	28	n/a	41	n/a	33	n/a
Child 16		9	17	0	15	5	24	35	37	23	33
Child 17		13	17	4	13	6	27	39	41	31	33
Child 18		13	14	0	12	4	11	36	40	31	31
Child 19		20	n/a	5	n/a	20	n/a	39	n/a	29	n/a
Child 20		19	21	13	15	35	42	40	41	33	33
D	5										
Child 21		10	n/a	0	n/a	1	n/a	30	n/a	11	n/a
Child 22		4	15	0	4	1	9	0	35	1	21
Child 23		12	24	0	15	1	34	36	41	22	33
Child 24		3	16	0	6	1	5	6	34	33	25
Total *M*		11.25	17.94	2.08	12.06	6.17	21.19	23.38	34.5	19	29.13
SD		3.88	3.13	4.55	8.54	10.94	12.8	15.70	9.93	11.66	5.4

Table 19. Correlations between Language, Literacy and Age at Testing at 5.0years (N=24)

		Child's age at test	TELL ME1	CAP1	WORD1	WRVOC1	H&RS1	LID1	ELICITED1
Child's age at test	Pearson Correlation	1	0.175	.541(**)	.432(*)	.456(*)	0.008	0.095	0.143
	Sig. (2-tailed)		0.425	0.008	0.04	0.029	0.971	0.666	0.516
	N	23	23	23	23	23	23	23	23
TELLME1	Pearson Correlation	0.175	1	0.277	.412(*)	.423(*)	.408(*)	.479(*)	.465(*)
	Sig. (2-tailed)	0.425		0.191	0.045	0.039	0.048	0.018	0.022
	N	23	24	24	24	24	24	24	24
CAP1	Pearson Correlation	.541(**)	0.277	1	.698(**)	.753(**)	.541(**)	.415(*)	0.293
	Sig. (2-tailed)	0.008	0.191		0	0	0.006	0.044	0.164
	N	23	24	24	24	24	24	24	24
WORD1	Pearson Correlation	.432(*)	.412(*)	.698(**)	1	.978(**)	.484(*)	.530(**)	0.374
	Sig. (2-tailed)	0.04	0.045	0		0	0.016	0.008	0.072
	N	23	24	24	24	24	24	24	24
WRVOC1	Pearson Correlation	.456(*)	.423(*)	.753(**)	.978(**)	1	.508(*)	.546(**)	0.376
	Sig. (2-tailed)	0.029	0.039	0	0		0.011	0.006	0.07
	N	23	24	24	24	24	24	24	24
H&RS1	Pearson Correlation	0.008	.408(*)	.541(**)	.484(*)	.508(*)	1	.772(**)	-0.06
	Sig. (2-tailed)	0.971	0.048	0.006	0.016	0.011		0	0.78
	N	23	24	24	24	24	24	24	24
LID1	Pearson Correlation	0.095	.479(*)	.415(*)	.530(**)	.546(**)	.772(**)	1	0.186
	Sig. (2-tailed)	0.666	0.018	0.044	0.008	0.006	0		0.383
	N	23	24	24	24	24	24	24	24
ELICITED1	Pearson Correlation	0.143	.465(*)	0.293	0.374	0.376	-0.06	0.186	1
	Sig. (2-tailed)	0.516	0.022	0.164	0.072	0.07	0.78	0.383	
	N	23	24	24	24	24	24	24	24

** Correlation is significant at the 0.01 level (2-tailed).
Correlation is significant at the 0.05 level (2-tailed).

Table 20. Correlations between Language, Literacy and Age at Testing at 6.0years (N=16)

		age2	TELLME2	CAP2	WORD2	WRVOC2	H&RS2	LID2	ELICITED2
age2	Pearson Correlation	1	0.03	-0.167	-0.085	-0.087	0.043	-0.028	0.003
	Sig. (2-tailed)		0.911	0.535	0.753	0.748	0.875	0.918	0.992
	N	16	16	16	16	16	16	16	14
TELLME2	Pearson Correlation	0.03	1	.687(**)	0.104	.798(**)	0.164	0.443	0.407
	Sig. (2-tailed)	0.911		0.003	0.701	0	0.544	0.086	0.148
	N	16	16	16	16	16	16	16	14
CAP2	Pearson Correlation	-0.167	.687(**)	1	0.018	.753(**)	.514(*)	.556(*)	0.386
	Sig. (2-tailed)	0.535	0.003		0.948	0.001	0.042	0.025	0.173
	N	16	16	16	16	16	16	16	14
WORD2	Pearson Correlation	-0.085	0.104	0.018	1	0.252	-.504(*)	.549(*)	-.571(*)
	Sig. (2-tailed)	0.753	0.701	0.948		0.346	0.047	0.028	0.033
	N	16	16	16	16	16	16	16	14
WRVOC2	Pearson Correlation	-0.087	.798(**)	.753(**)	0.252	1	0.392	.623(**)	0.3
	Sig. (2-tailed)	0.748	0	0.001	0.346		0.133	0.01	0.298
	N	16	16	16	16	16	16	16	14
H&RS2	Pearson Correlation	0.043	0.164	.514(*)	-.504(*)	0.392	1	0.306	0.337
	Sig. (2-tailed)	0.875	0.544	0.042	0.047	0.133		0.25	0.239
	N	16	16	16	16	16	16	16	14
LID2	Pearson Correlation	-0.028	0.443	.556(*)	.549(*)	.623(**)	0.306	1	-0.347
	Sig. (2-tailed)	0.918	0.086	0.025	0.028	0.01	0.25		0.225
	N	16	16	16	16	16	16	16	14
ELICITED2	Pearson Correlation	0.003	0.407	0.386	-.571(*)	0.3	0.337	-0.347	1
	Sig. (2-tailed)	0.992	0.148	0.173	0.033	0.298	0.239	0.225	
	N	14	14	14	14	14	14	14	14

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Table 21.   Exposure to Māori prior to entering Kura

Child	Exposure to Māori
1	Te Kōhanga Reo attendance, 3years 6months
4	Te Kōhanga Reo attendance, 3years 6months
21	Te Kōhanga Reo attendance, 3years 6months
23	Te Kōhanga Reo attendance, 4years

Children's language and literacy after 1 year at school
A wide range of language and literacy skills

After a year at school, and as on entry to school, on each of the language and literacy measures children showed wide variations. In the Kii Mai assessment the range was from a score of 8 to a score of 16 (18 is the maximum; see Table 18). The overall mean was $M = 12.6$ up from $M = 10.6$ obtained by the children at 5.0 years. This difference was significant. (t=3.451, p<.01). The children as a group had made gains in control over Te Reo Māori over the year and now there were 5 children out of 16 (30%) who had scores of 15 or better. All children had progressed above the level of requiring special help, and to varying degrees could use language competently in this activity after one year at school. It is not possible to directly link this outcome to the teaching. However, it is important to note two features. All but one child improved, and age of testing was still not correlated with Te Reo Māori language measures. On the other hand continuing experience at home was likely to have impacted as shown by the scores of the 4 children with known strong Te Reo Māori backgrounds.

The Elicited Conversations scores ranged from 0 to 12, again showing a wide variation. The overall mean score was $M = 10.79$ which was a large increase from a mean score of 6.17 achieved by children at 5.0 years. This difference was also significant (t=7.697, p<.001). This adds to the description of children gaining in the control over Te Reo Māori over the first year of instruction. 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.

Children's literacy scores at 6.0 years can be compared with norms from He Mātai Āta Titiro Ki Te Tūtukitanga Mātātupu Pānui, Tuhi and are shown below (see Table 23). The comparisons show that children were in the highest quartile group for the CAP assessment, and at quartile 3 for the WORD assessment. For the LID, WRVOC and H&RS assessments they were all at quartile 2, therefore the children were at average to high levels in the assessments of reading and writing.

Table 22.   Literacy measures at 6.0 years compared with Norms from He Matai Āta Titiro Ki Te Tūtukitanga Mātātupu Pānui, Tuhi. Means, range and quartile group (1-4, 1 lowest, 4 highest)

	At 6.0 years (N=16)	Comparisons	
		Range	Quartile group
LID – **Te Tāuta Reta**	29.13	21-30	2
CAP – **Ngā Tikanga O Te Tuhi Kōrero**	17.94	16-24	4
WORD – **Te Whakamātautau**	12.06	8-13	3
WRVOC – **Te Tuhi Kupu**	21.19	7-23	2
H&RS – **Whakarongo, Tuhia Ngā Tangi O Roto I Ngā a Kupu**	34.5	17-35	2

The patterns of relationships between literacy measures are somewhat different from those obtained in English which show consistently and highly significant intercorrelations between conventional measures at 6.0 years (Clay, 2002). The likelihood here is that this can be attributed to the small sample size. However, it is interesting to note that the one measure which was not consistently related to the others was word recognition and in two instances was negatively correlated (with H&RS and Elicited2). This might suggest that overall a set of words able to be recognised is dependent on other specific language and literacy experiences outside of specific instruction, for example, words in children's ambient environment or that this recognition is very dependent on the exposure to the texts that contain those words.

The pattern of inter correlations with language at 6.0 years (see Table 20) was similar to that at 5.0 years. Although the correlation between Kii Mai and Elicited Conversation was r=0.407 (p=0.148), and, while not significant, given the smaller sample size this nevertheless indicates a relatively close relationship. The Kii Mai language measure was significantly related to Concepts about Print (r=0.687) and Writing Vocabulary (r=0.798), but at 6.0 years not Phonological knowledge, Letter knowledge, or Word recognition. Those literacy measures tended to be related to each other. What this suggests is that some aspects of early literacy and language continued to be related, specifically concepts about print and writing. These latter measures are closely related to the meanings and use of language rather than components such as letters or indeed recognising words. The indication here as in other longitudinal studies in English medium overseas and in New Zealand (Dickinson & Tabors, 2001; Tunmer, Chapman, Ryan & Prochnow, 1998) is that the longer term language and literacy relationships are particularly important in the development of meaning and comprehension pathways of literacy. Language competency, especially in hearing and responding to language may have a specific impact on the early stages of learning to decode. These findings also underline the interpretations suggested at the end of Study 2, that complex talk by the teacher may be particularly important to the development of more complex child language and would impact on the further development of literacy.

An interesting general feature of the correlations at 6.0 years is the finding that there were no relationships with age of testing after a year at school. This suggests that specific teaching and other experiences were critical generally not just getting older or time since starting school.

DISCUSSION AND IMPLICATIONS

Study 3 dealt with the relationships between the development in early literacy and in oral language in Māori medium classrooms spread across Aotearoa New Zealand. The descriptions of 24 children from the beginnings of classroom instruction to after a year in instruction showed a number of features. Firstly, there were wide individual differences in literacy and language on entry to school. Thereafter there was rapid development in literacy and substantial growth in receptive and expressive language. A number of language measures were employed to make these judgments and these indicated that the teaching programmes were associated with development in Te Reo Māori (although the causal link cannot be demonstrated in this correlational analysis). An interesting finding was that the children found the more structured retelling task easier to do than the more open ended narrative task, raising issues about the experience children have prior to school in past event narratives. As experience with these narratives has been found in English to be related to literacy and particularly comprehension at school (Dickinson & Tabors, 2001) this might be an area for further development in educational practices in Te Kōhanga Reo and at the beginning of school. The literacy and language measures were generally highly intercorrelated. At the beginning of instruction this suggests that developing control in Te Reo Māori is associated with developing emergent literacy. After a year of instruction the level of control in Te Reo Māori became more significant for the more directly text-related measures such as writing vocabulary and concepts about print. Age at first testing was not necessarily related to control of language, rather prior exposure through family and community experiences appeared to be important. As children moved through the first year age was not the determinant, of progress, rather it appeared it was the specific instructional experiences. Several general implications of this study are:

- The research demonstrates the usefulness to teachers of having measures which assess the quality of children's oral language (Te Reo Māori) and its development over the first year at school. Facility with such measures would enable more targeted support and guidance in Te Reo Māori.

- The need to consider the place of personal conversational narratives at home and in Māori medium early childhood / Te Kōhanga Reo to enhance the transition to literacy and language learning at school; particularly the development of oral and written comprehension. Complex conversational language appeared to be developing more slowly than more structural language uses.

- The instructional implications include the need for fine grained assessments of literacy and language profiles both standardised and embedded in everyday observation; and means of collecting background information on literacy and language experiences. Teachers in general need such detailed and personalised knowledge to teach effectively (Darling-Hammond, 1998; McNaughton, 2002).

Overall Discussion

1. One of the overall implications for the Ngā Taumatua teachers and their work alongside Kura and Kaiako is the need for specific guidelines relating to language development and relationships with literacy activities over the early part of teaching in Kura. This needs to be specifically about what is known about pathways and the variable profiles in development of Te Reo Māori.

2. In addition, there needs to be a focus in the Ngā Taumatua programme on multiple forms of measurement including writing and language, not just those that measure reading abilities. The problem with this and the previous recommendation is that the research and development base is very limited. Both of these implications carry further implications for research and development programmes in these areas which are able to feed into the training programme. It may very well be that the research projects carried out by Ngā Taumatua teachers feed into this.

3. It should be noted that one of the constraints of the methodology used in the present study is the small sample sizes. This therefore limits the conclusions.

4. More research that focused on language development and aspects of relationships with language learning contexts outside of school would be useful to this programme. This research needs to look at how whānau contexts can contribute to language and literacy development before school and over the transition to formal instruction at school. A model for this sort of research can be found in Hohepa (1999).

5. These three studies indicate that in general there is a distinct need for specialist advice to classroom teachers around language and literacy development. An example of this is how teachers might benefit from specialist help in how to develop complex language uses including complex narratives.

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Appendix 1

Table 23.   Ngā Taumatua Teachers

Reo	Qualification held	Years in Education	Years in Māori Medium Bilingual Education	Years in Mainstream	Years RTM
1	Dip Teaching Tohu Mātauranga Māori	10	3		7
2	Dip Teaching	20	3	15	2
1	Dip Teaching Tohu Matauranga Māori	30+			13
1	Dip Teaching B Ed currently Post Grad Lit Dip ICT	5	5		1
	Dip Teaching Advanced Dip Language Acquisition	30+			12
2	Dip Teaching Dip Bilingual Teaching Bed	12	12	0	
1	Dip Teaching currently Bed	15		10	5
2	BA MA (Māori Ed)				
1	Dip Teaching Higher Dip Teaching Dip Bilingual Teaching	19	5	5	9
2	Dip Teaching Tohu Matauranga Māori	36	2	21	11
2	Dip Teaching Dip TESSOL Higher Dip Tchng	23+		11	12

Table 24.   1 Tārua (tia)/ tāruarua (repeat): Retell

Definition: *Tāruarua* is defined as the restatement of the major information-structure propositions *about* the text, assessed under **Content** and **Sequencing**.		
Te Reo Māori does not have to be assessed in relation to its consistency with text.		
Content	**Sequencing**	**Te Reo Māori**
		Grammar and structure
0 = No response, Incorrect response, Unconnected response	**0** = No response	**0**= No response
1= 1-2 main points mentioned	**1**= No sequencing of main points; disorganised presentation of ideas.	**1**= Single word or telegraphic utterances (3-4 word maximum).May include English syntax, syntactic language mixing.
2= more than 2, less than half of main points mentioned	**2**= 2 or more but less than ½ points following logical text sequence	**2**= small no. of grammatical structures used repeatedly. Highly likely to contain grammatical errors. May include words that integrate into meaning of Māori utterances.
3= over half to all of main points mentioned	**3**= over half of main points following logical text sequence	**3** = A range of grammatical structures used (at least 3). May include exploratory use (ie not all strictly grammatically correct) of personal possessives, negatives, passive constructions.
4= almost all/all main points mentioned with a sense of the genre of the text as expository/ information text.	**4**= Coherent, logical sequence of almost all / all main points presented as an integrated whole that summarises article.	**4**= Full, complex sentences. A range of linguistic structures used eg personal possessives, negatives, conjunctions, passives. Almost all are used correctly.

Appendix 2

Table 25. Introduction to Instructional Reading at Time 1

	Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5	Mean
Exchanges						
Item	15	4	13	7	n/a	9.8
(Sound)	3	0	1	0	n/a	1.0
Performance	0	1	2	1	n/a	1.0
Narrative	0	0	1	1	n/a	0.5
Focus						
Awareness	5	0	8	0	n/a	3.3
Incorporation	0	0	0	1	n/a	0.3
Talk						
Extended	0	0	1	0	n/a	0.3
Elaboration	0	0	0	0	n/a	0.0
Questions/Instructions	89	27	27	14	n/a	39.3
Feedback						
Positive	21	11	12	7	n/a	12.8
Corrective	0	3	2	0	n/a	1.3

Table 26. Instructional Reading at Time 1

	Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5	Mean
Exchanges						
Item	0	26	17	24	5	14.4
(Sound)	0	3	17	6	3	5.8
Performance	2	27	39	3	1	14.4
Narrative	0	1	0	1	0	0.4
Focus						
Awareness	4	16	37	7	10	14.8
Incorporation	0	0	0	7	0	1.4
Talk						
Extended	3	1	0	5	0	1.8
Elaboration	0	0	0	1	0	0.2
Questions/Instructions	10	168	164	116	28	97.2
Feedback						
Positive	3	50	26	28	10	23.4
Corrective	0	14	15	4	1	6.8

Table 27.   Introduction to Reading To at Time 1

	Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5	Mean
Exchanges						
Item	0	18	0	n/a	n/a	6.0
(Sound)	0	2	0	n/a	n/a	0.7
Performance	0	1	0	n/a	n/a	0.3
Narrative	0	0	0	n/a	n/a	0.0
Focus						
Awareness	2	10	2	n/a	n/a	4.7
Incorporation	0	0	1	n/a	n/a	0.3
Talk						
Extended	0	0	1	n/a	n/a	0.3
Elaboration	0	3	1	n/a	n/a	1.3
Questions/Instructions	7	43	6	n/a	n/a	18.7
Feedback						
Positive	2	10	3	n/a	n/a	5.0
Corrective	0	1	0	n/a	n/a	0.3

Table 28.   Reading To at Time 1

	Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5	Mean
Exchanges						
Item	10	27	1	6	n/a	11.0
(Sound)	0	2	0	0	n/a	0.5
Performance	0	3	0	0	n/a	0.8
Narrative	0	0	4	4	n/a	2.0
Focus						
Awareness	12	4	0	1	n/a	4.3
Incorporation	1	1	1	1	n/a	1.0
Talk						
Extended	0	7	2	2	n/a	2.8
Elaboration	0	1	11	3	n/a	3.8
Questions/Instructions	29	87	21	35	n/a	43.0
Feedback						
Positive	7	23	5	13	n/a	12.0
Corrective	1	2	0	2	n/a	1.3

Table 29.   Introduction to Instructional Writing at Time 1

	Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5	Mean
Exchanges						
Item	9	n/a	n/a	1	n/a	5.0
(Sound)	0	n/a	n/a	0	n/a	0.0
Performance	3	n/a	n/a	1	n/a	2.0
Narrative	0	n/a	n/a	0	n/a	0.0
Focus						
Awareness	11	n/a	n/a	1	n/a	6.0
Incorporation	0	n/a	n/a	1	n/a	0.5
Talk						
Extended	0	n/a	n/a	0	n/a	0.0
Elaboration	0	n/a	n/a	1	n/a	0.5
Questions/Instructions	45	n/a	n/a	31	n/a	38.0
Feedback						
Positive	14	n/a	n/a	2	n/a	8.0
Corrective	0	n/a	n/a	1	n/a	0.5

Table 30.   Instructional Writing at Time 1

	Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5	Mean
Exchanges						
Item	2	8	8	1	1	4.0
(Sound)	8	16	8	2	0	6.8
Performance	0	12	9	3	3	5.4
Narrative	0	0	0	0	0	0.0
Focus						
Awareness	18	24	23	4	15	16.8
Incorporation	0	0	0	0	0	0.0
Talk						
Extended	0	0	0	0	0	0.0
Elaboration	0	0	0	0	0	0.0
Questions/Instructions	75	153	94	56	7	77.0
Feedback						
Positive	22	66	23	20	2	26.6
Corrective	0	3	5	2	0	2.0

Table 31.   Introduction to Shared Writing at Time 1

	Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5	Mean
Exchanges						
Item	1	8	3	n/a	n/a	4.0
(Sound)	1	12	8	n/a	n/a	7.0
Performance	0	1	2	n/a	n/a	1.0
Narrative	0	1	0	n/a	n/a	0.3
Focus						
Awareness	3	12	22	n/a	n/a	12.3
Incorporation	0	0	0	n/a	n/a	0.0
Talk						
Extended	0	0	0	n/a	n/a	0.0
Elaboration	0	0	0	n/a	n/a	0.0
Questions/Instructions	4	44	47	n/a	n/a	31.7
Feedback						
Positive	3	32	3	n/a	n/a	12.7
Corrective	0	6	1	n/a	n/a	2.3

Table 32.   Shared Writing at Time 1

	Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5	Mean
Exchanges						
Item	15	6	8	5	3	7.4
(Sound)	9	10	5	0	8	6.4
Performance	0	4	2	6	3	3.0
Narrative	0	0	0	4	0	0.8
Focus						
Awareness	19	9	15	2	6	10.2
Incorporation	0	0	0	0	0	0.0
Talk						
Extended	0	0	0	4	0	0.8
Elaboration	0	0	0	10	0	2.0
Questions/Instructions	48	41	52	60	20	44.2
Feedback						
Positive	21	27	15	10	10	16.6
Corrective	3	3	4	3	1	2.8

Table 33.   Introduction to Instructional Reading at Time 2

	Teacher 4	Teacher 6	Teacher 7	Mean
Exchanges				
Item	n/a	n/a	1	1.0
(Sound)	n/a	n/a	0	0.0
Performance	n/a	n/a	7	7.0
Narrative	n/a	n/a	2	2.0
Focus				
Awareness	n/a	n/a	2	2.0
Incorporation	n/a	n/a	0	0.0
Talk				
Extended	n/a	n/a	0	0.0
Elaboration	n/a	n/a	0	0.0
Questions/Instructions	n/a	n/a	48	48.0
Feedback				
Positive	n/a	n/a	17	17.0
Corrective	n/a	n/a	5	5.0

Table 34.   Instructional Reading at Time 2

	Teacher 4	Teacher 6	Teacher 7	Mean
Exchanges				
Item	n/a	9	2	5.5
(Sound)	n/a	0	3	1.5
Performance	n/a	3	4	3.5
Narrative	n/a	0	2	1.0
Focus				
Awareness	n/a	3	5	4.0
Incorporation	n/a	6	7	6.5
Talk				
Extended	n/a	1	2	1.5
Elaboration	n/a	3	6	4.5
Questions/Instructions	n/a	57	115	86.0
Feedback				
Positive	n/a	41	36	38.5
Corrective	n/a	2	10	6.0

Table 35. Introduction to Reading To at Time 2

	Teacher 4	Teacher 6	Teacher 7	Mean
Exchanges				
Item	n/a	2	1	1.5
(Sound)	n/a	0	3	1.5
Performance	n/a	3	1	2.0
Narrative	n/a	0	0	0.0
Focus				
Awareness	n/a	10	2	6.0
Incorporation	n/a	2	0	1.0
Talk				
Extended	n/a	1	0	0.5
Elaboration	n/a	0	0	0.0
Questions/Instructions	n/a	34	16	25.0
Feedback				
Positive	n/a	13	2	7.5
Corrective	n/a	0	1	0.5

Table 36. Reading To at Time 2

	Teacher 4	Teacher 6	Teacher 7	Mean
Exchanges				
Item	17	9	8	11.3
(Sound)	0	18	2	6.7
Performance	9	1	6	5.3
Narrative	0	0	2	0.7
Focus				
Awareness	2	24	4	10.0
Incorporation	2	1	1	1.3
Talk				
Extended	0	0	0	0.0
Elaboration	9	0	5	4.7
Questions/Instructions	102	58	38	66.0
Feedback				
Positive	51	36	32	39.7
Corrective	3	1	7	3.7

Table 37. Instructional Writing at Time 2

	Teacher 4	Teacher 6	Teacher 7	Mean
Exchanges				
Item	n/a	1	22	11.5
(Sound)	n/a	0	21	10.5
Performance	n/a	1	17	9.0
Narrative	n/a	0	1	0.5
Focus				
Awareness	n/a	6	32	19.0
Incorporation	n/a	0	0	0.0
Talk				
Extended	n/a	2	1	1.5
Elaboration	n/a	0	2	1.0
Questions/Instructions	n/a	60	187	123.5
Feedback				
Positive	n/a	18	106	62.0
Corrective	n/a	1	12	6.5

Table 38. Introduction to Shared Writing at Time 2

	Teacher 4	Teacher 6	Teacher 7	Mean
Exchanges				
Item	n/a	n/a	0	0.0
(Sound)	n/a	n/a	0	0.0
Performance	n/a	n/a	1	1.0
Narrative	n/a	n/a	0	0.0
Focus				
Awareness	n/a	n/a	0	0.0
Incorporation	n/a	n/a	0	0.0
Talk				
Extended	n/a	n/a	0	0.0
Elaboration	n/a	n/a	0	0.0
Questions/Instructions	n/a	n/a	5	5.0
Feedback				
Positive	n/a	n/a	1	1.0
Corrective	n/a	n/a	1	1.0

Table 39.   Shared Writing at Time 2

	Teacher 4	Teacher 6	Teacher 7	Mean
Exchanges				
Item	n/a	7	4	5.5
(Sound)	n/a	2	0	1.0
Performance	n/a	4	7	5.5
Narrative	n/a	0	0	0.0
Focus				
Awareness	n/a	2	7	4.5
Incorporation	n/a	0	0	0.0
Talk				
Extended	n/a	0	0	0.0
Elaboration	n/a	0	0	0.0
Questions/Instructions	n/a	48	52	50.0
Feedback				
Positive	n/a	38	23	30.5
Corrective	n/a	3	9	6.0