



Whakawhānuitia te Hinengaro: Broadening the mind: Reading to learn in te reo Māori – reading comprehension and language development

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Whakawhānuitia te Hinengaro
**Broadening the mind: Reading to learn in te reo Māori – reading
comprehension and language development**

Final Milestone Report to

Ngā Pae o te Māramatanga
National Institute of Research Excellence for Māori Development and
Advancement

Prepared by Margie Hohepa, Noema Williams and Julia Barber

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Abstract

This is a report of findings from a 2 year project focused on kaiako literacy instruction practices and taura learning pertaining to reading comprehension and Maori vocabulary development. The research project was exploratory and descriptive in nature with an intervention component. The research drew on cross-sectional and longitudinal design using quantitative and qualitative data collection methods. The study involves five Kura Kaupapa Maori schools located in rural communities or small rural townships. The participating kura were part of a research collective. Kura staff and researchers were involved in a collaborative process involving the collection, analysis and feedback of student achievement and classroom observation data. The first year of the project involved collecting baseline data to develop literacy learning and teaching profiles. The second year involved collaborative professional learning opportunities for Maori-medium teachers to develop instructional strategies to support and improve their students' reading comprehension and Maori language development. The project found that changes in teacher instructional practices, in particular their use of questioning and feedback were accompanied by some positive changes in patterns of assessment scores and mean scores for different cohort groups of taura. The findings are discussed in terms of their implications for teaching practices in Māori medium settings and for opportunities for professional learning.

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1. Ko te Rangahau

This report presents findings from a two-year research project on literacy teaching and learning in Kura Kaupapa Māori¹ Year 4 to Year 8 classrooms. The project focused on:

- Kaiako² literacy instruction practices; and
- Taurira³ learning pertaining to reading comprehension and Māori language.

The participating Kura were part of a research collective. School staff and researchers worked in a collaborative process involving the collection, analysis and feedback of taurira assessment data and classroom observation data. The first year of the project involved collecting baseline data to develop literacy learning and teaching profiles, which were discussed with Kura members at the middle and end of the school year. In addition to collecting data on teaching and learning, the second year involved opportunities for collaborative learning for kaiako to develop instructional strategies aimed at supporting and improving their students' reading comprehension and Māori language development.

The research context

The project was carried out in five⁴ Kura Kaupapa Māori in Te Tai Tokerau, the northern region of the North Island of Aotearoa New Zealand. Te Tai Tokerau encompasses at least five northern Iwi rohe⁵. According to the 2001 Census⁶ 30% of 40,700 Māori living in Te Tai Tokerau can converse to some extent in te reo Māori. Sixteen percent of Māori households in the region have both adults and children who speak some Māori enabling some intergenerational language development and use (Te Puni Kōkiri 2004). Census data show that there are significant differences in te reo Māori fluency across age groups, over 57% of Māori aged 55 years or over are te reo Māori speakers compared with 25% of Māori under 55 years.

¹ Kura Kaupapa Maori are schools that operate within a Maori cultural-philosophical framework in which Maori is the medium of instruction.

² Teacher/s

³ Student/s

⁴ The first data collection round involved 6 kura. A school review process that involved rationalising the number of schools in the northern area was taking place at that time, which resulted in one of the kura being closed.

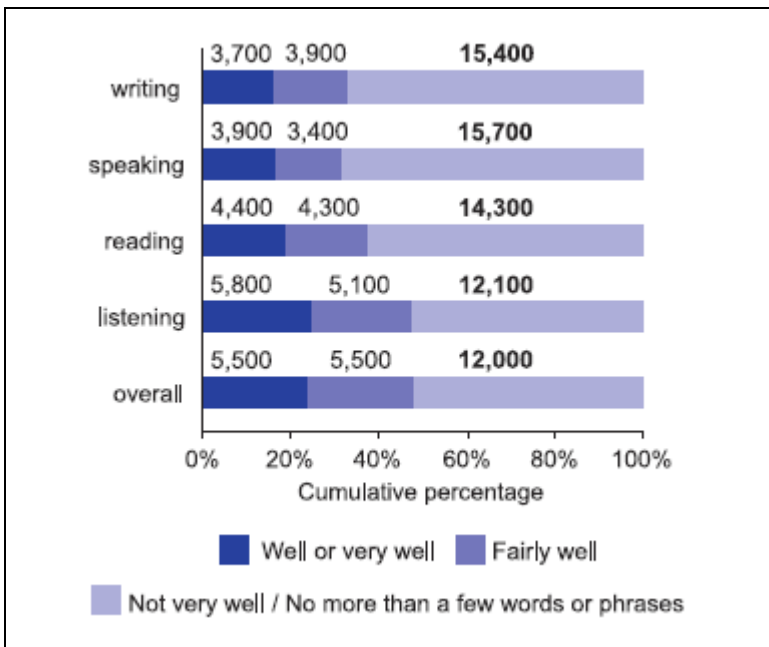
⁵ 'Tribal' territories, which may be overlapping and/or contested

⁶ Census data available on-line- Statistics New Zealand; www.stats.govt.nz.

Nearly all participants in the project were 55 years or under.

Literacy is identified as a critical component in the regeneration of an indigenous language such as Māori (Baker, 1996; Fishman, 1991; Hohepa, 1999). In Te Tai Tokerau more people are able to listen and read more in te reo Māori than able to speak or write it, as shown in Figure 1 below. Te Puni Kōkiri (2004) estimates that while about 10,100 people in the region regularly read Māori texts, only a third do so more than once a week.

Figure 1: Percentage of Māori speakers



(Source of figure: Te Puni Kōkiri 2004:7)

Literacy is also fundamental to academic achievement in schools. Aotearoa New Zealand is one of many countries in which an indigenous people have identified educational provisions through the medium of the indigenous language as a critical factor in its retention and regeneration. The first Māori-English bilingual school was opened in the 1970s, followed by a growth explosion of Kohanga Reo, Māori language nests, catering for pre-school children and their whānau (families), in the early 1980s. In the mid 1980s ‘Kura Kaupapa Māori’ (KKM) was initially developed by Māori for Māori outside of the state education system and is now part of the state compulsory schooling provisions. A major aim of KKM is the continuation of Māori language and culture.

There are approximately 60 Māori medium early childhood programmes (mainly Te Kōhanga Reo) catering for around 1000 children (Te Puni Kōkiri 2004). There are over 2,600 school aged children learning in Māori for at least 30% of the time representing about 20% of the region's Māori student population (Ministry of Education 2005). Nearly 3000 Maori children are in Te Tai Tokerau schools learning in te reo Māori to some degree. One thousand, one hundred and forty four of the students are learning in Māori for 80% or more of their school time, over seven hundred in KKM⁷. When the project began there were ten schools in the region that were either designated KKM (5 Kura) or that had applied for designation as KKM under Section 155 of the Education Act.

Given the role of literacy in language regeneration and in academic achievement, schools have a complex role as a site of literacy teaching and learning in indigenous language regeneration contexts. The role not only includes actively advancing the agenda of indigenous language and culture but also ensuring the academic achievement of indigenous students. The challenge to address both these without sacrificing either is a huge task. Such a challenge adds complex dimensions to what counts as quality teaching and learning outcomes in KKM.

Māori medium schooling is still in a early state of development. Growth in research coming out of these settings has been slow. The relative youth of KKM, coupled with an awareness of the historically negative impact of research on Māori (Smith, 1999) has contributed to the small corpus of available research literature. Concerns have been expressed about the dangers of little systematic research conducted in Māori medium settings. One danger is that in the relative absence of Māori medium research, teaching and learning, resource development and assessment will be informed and driven by English medium knowledge, needs and developments. A leading literacy researcher for Māori medium education makes the observation that developing literacy instruction and assessment through arbitrarily and uncritically emulating practices for English medium can compromise the integrity, the reliability and validity of such developments. Such an approach assumes pedagogical and cultural compatibility. Cath Rau states that

⁷ Information on student numbers as of June 2006, from <http://www.tki.org.nz/e/schools/>.

It would appear that aspirations for pedagogical and epistemological self-determination in Māori medium education are being compromised by internal and external pressures to both mirror and 'catch up' with English medium education. (2001, 2).

Māori literacy underachievement in English medium schools has been an ongoing feature of English medium schooling in Aotearoa New Zealand. Two reports were released in 1999 that have implications for Māori literacy in both English medium and Māori medium educational settings (Literacy Experts Group 1999; Ministry of Education 1999). Focused efforts have gone into reducing disparities in educational achievement experienced by Māori, Pasifika⁸ and taura in low decile⁹ English medium schools. Research-based interventions have demonstrated that teachers can raise the rates of Maori early literacy progress significantly in English medium settings (Phillips, G., McNaughton, S., & MacDonald, S. 2001; Flockton & Crooks, 2001).

Both the Literacy Task Force and the Literacy Experts Group identified need for more research and development targeted at developing literacy teaching practice and assessment tools appropriate for Māori medium education. Such needs had been identified on many previous occasions (Benton, Berryman, Glynn, Hindle, Kapa, Rau, & Murphy 1996; Hohepa & Smith 1996; Hohepa 1997; Hollings 1992).

When the possibility of this project was being discussed in 2004 there were relatively few Māori assessment tools available. To date, one Māori language proficiency test has been developed and trialled in Māori medium schools (Crombie, Houia & Reedy, 2000). Māori medium educational contexts are still limited to three standardised procedures for assessing student literacy achievement (Rau 2005). These procedures include Assessment Tools for Teaching and Learning (asTTIE) that provides curriculum related test items appropriate to year 5 and year 8 for Pānui, Tuhituhi and Pāngarau¹⁰. Tests may be devised through teacher selection from available test items. The National Education Monitoring Project (NEMP) focuses on year

⁸ Taura who identify culturally and/or genealogically to a Pacific Islands nation.

⁹ In New Zealand schools are given a decile rating that indicates the general socioeconomic level of the communities they draw from, with decile one being the 10% of schools which draw the highest proportion of taura from low-socioeconomic backgrounds. Most Kura Kaupapa Maori fall into decile one. In addition Kura Kaupapa Maori tend to be small schools; only two of the kura participating in this study have more than 100 taura.

¹⁰ Māori medium curriculum relating to reading, writing and mathematics. These have been developed in parallel with English curriculum related test items in these three areas.

4 and year 8 taura across the eight national curriculum areas including reading and writing. NEMP develops parallel tests for Māori and English medium to examine performance trends over four year periods. A third assessment is Aromatawai Urunga a Kura (AKA). AKA was developed for assessing new entrant taura across three dimensions: concepts about print, oral story re-telling and numeracy skills and mathematical concepts. English and Māori versions are available. Limited assessment tools creates a situation in which individual teachers, schools or groups of schools take on the task of constructing tests to try and meet the assessment needs of their taura and programmes, drawing on varying degrees of language and assessment related knowledge with varying success (Rau 2005).

Need for Māori medium literacy assessment measures have been the focus of research carried out by Rau, Whiu, Thomson, Glynn & Milroy (2001). The study involved eight Māori medium schools including four KKM and focused on year one and year two students. The researchers examined the use of literacy assessment tools that were available for use in Māori medium settings and their relative appropriateness in relation to Māori medium learners. One key finding of the research is that Māori medium literacy programmes and assessments need to be sensitive to the linguistic diversity of learners in Māori medium settings (Rau 2005). Rau, Whiu, Thomson, Glynn & Milroy (2001) proposed a framework for capturing the literacy progress of taura in Māori medium settings in their first years of schooling (Rau 2001).

Literacy teaching and learning has also been a focus of research in Māori medium educational settings. A study carried out by Bishop, Berryman & Richardson (2001) set out to identify effective teaching and learning strategies and resources and the assessment and monitoring procedures that teachers use in literacy programmes across years 1 to 5. The study involved the collaborative development of a concept of effective teachers in Māori medium, which included teacher personal qualities and pedagogical characteristics.

Personal qualities that were identified across the participating Māori medium teachers involved:

- Treating taura and their whānau with respect
- Compassion, confidentiality and a sense of humour
- Acting in a just and fair manner towards others
- Friendly but firm relations with students
- Personal qualities that are culturally located (Bishop et al 2001:viii).

Pedagogical characteristics included:

- Depth of knowledge
- Passionate about what they do
- Having a philosophy of teaching and clear teaching goals
- Having a commitment to developing students' understandings and growth
- Using non-confrontational behaviour management and excellent classroom management
- Showing a genuine interest in taura including provision of high quality feedback
- Continual reflecting upon their own teaching
- Having high expectations while offering comfort and challenges
- Using prior learning experiences and knowledges and material related to children's world view and experiences
- Monitoring of student progress and encouraging student self-evaluation
- Matching strategies and materials to individual or group abilities
- Emphasis on oral language
- Integrated curriculum
- Fostering high degree of academic engagement and importance of ako (as reciprocal teaching and learning)
- Close links with whānau
- Creating culturally appropriate and responsive contexts for learning (Bishop et al 2001:viii-xi).

Patterns of teaching in year 1 and 2 Māori medium classrooms literacy have been described and analysed in order to develop descriptions of good practice. McNaughton, MacDonald, Barber, Farry & Woodard (2006) provide some descriptive analysis of literacy instruction and children's literacy and language development in first year Māori medium classes. Five Māori medium sites and kaiako were selected on the premise that they reflected current best practice in literacy instruction. A basic pattern of teaching was described in the study that included:

- High rates of questions focused on learning items such as letters and letter combinations in words
- High rates of feedback
- Relatively low rates of extended or elaborated talk.

In addition to high rates of questioning focused on specific learning items, McNaughton et al

(2006) observed a noticeable focus on enhancing children's awareness of concepts about print in general and in relation to reading and writing in te reo Māori. With respect to rates of feedback, good quality teacher feedback is known to make a positive impact on learning in the context of English-medium classrooms (Hattie 1999). Bishop et al (2001) also found that effective teachers in Māori medium classrooms provided high quality feedback, particularly positive feedback and praise as reinforcers. Extended and elaborated talk in English medium contexts has been linked to the development of aspects of receptive and expressive language, including vocabulary and complexity of utterances (Dickinson & Tabors 2001; Whitehurst & Lonigan 2001). Links have also been drawn between expanded adult and child talk in home bookreading activities for Māori language use and development (Hohepa 1999). Low rates of extended or elaborated talk in Māori medium settings may be a potential limiting factor in the development of complex language forms (McNaughton, MacDonald, Barber, Farry & Woodard (2006). McNaughton et al's (2006) study points to the potential of increasing the complex language used by both teachers and children in core literacy activities as a means to support Māori literacy and language development in Māori medium settings.

There is a research gap in relation to systematic examinations of patterns of literacy instruction and literacy and language learning and development in Māori medium settings for the later primary school years. There is not a great amount of information about what happens in Māori medium literacy instruction as taura move from 'learning to read' in Māori to 'reading to learn'. During the latter primary school years being able to comprehend, evaluate and synthesise what is read becomes more and more critical for academic achievement. There is also little information about the use of non-fiction texts in Māori medium reading programmes. Indications are that there are generally low levels of use of non-fiction, expository or informational texts in school reading instruction, despite the daily demands for the reading of informational texts in our lives (Duke, 2000 cited in Block & Pressley 2002: 259). Reading programmes have been largely associated with the reading of fiction, arguably, to the possible disadvantage of taura faced with the prospect of comprehending informational texts related to difficult content areas in the latter years of schooling (Ogle and Blachowicz 2002).

Reading comprehension is generally defined as obtaining meaning from a written text, often for a particular purpose. Reading comprehension in effect has been found to draw on a repertoire of processes that include prediction, questioning, relating to prior knowledge, visualising,

seeking clarification and summarising (Block & Pressley, 2003; Garcia 2003; Palincsar & Brown 1984). In English medium settings there is evidence that Māori taura experience wide and increasing disparities in achievement on comprehension tasks (Lai, McNaughton, MacDonald, & Farry, 2005). This situation exists in a context where internationally there is large body of empirical and theoretical knowledge about reading comprehension and its relationship to language development in English-medium (generally monolingual) literacy practice (Block, Gambrell & Pressley, 2002). Some of the key understandings that have emerged include the strong relationship that exists between comprehension and vocabulary development. While one can have a well developing vocabulary without necessarily having good comprehension skills, the reverse does not appear to hold. That is the development of comprehension skills appears to also require a well developing vocabulary. There is also evidence that children who have well developing oral language are more likely to become good comprehenders (Block, Gambrell & Pressley, 2002). Current understandings such as the ones above indicate there are likely to be particular and complex challenges for teachers and taura who may be bilingual or second language learners in relation to the development of reading comprehension.

Indications from comprehension research coming out of English medium contexts are that knowledge about reading comprehension can bring about a transformation of comprehension teaching in schools (Pressley, 2001). Work carried out by the Woolf Fisher Research Centre provides instances of how this knowledge can be effectively transferred to teacher practice in English-medium schools and in Samoan bilingual classrooms (Lai et al 2005; McNaughton, Lai, MacDonald, & Farry 2004; Toloa & McNaughton, 2005). Current published research however provides relatively little guidance for kaiako working in Māori medium contexts, who are often working in their second language with many of their taura learning in their second, albeit indigenous, language (Block, Gambrell & Pressley, 2002; Garcia 2003).

The project

In cognisance of the research context briefly described above, the project involved the collection of data on:

- Kaiako literacy instruction practices pertaining to comprehension; and
- Taura learning pertaining to reading comprehension and Māori vocabulary development.

and

- Provision of collaborative learning opportunities for Kaiako to discuss classroom and student data and to develop instructional strategies aimed at supporting and improving their students' reading comprehension and Māori language development.

The aims of the project were to:

- Contribute to research-based knowledge of current practices in literacy in KKM
- Provide analysis of patterns and relationships between reading comprehension and language development to help inform the development of effective literacy programmes in KKM.
- Contribute to research based knowledge of effective teaching strategies for reading comprehension and language development in KKM in Y4 to Y8.
- Develop and pilot a professional development approach to inform and upskill kaiako.

A longer-term aim underpinning the project is to contribute to the development of whānau programmes focusing on whānau members' support of taurira literacy and language development.

2. Ko ngā tikanga rangahau

In 2003 the tumuaki¹¹ of nine Kura¹² discussed the possibility of a research project focusing on literacy. Six Kura were identified amongst the group as potential participants. Two were Kura Tuakana, schools designated Kura Kaupapa Māori under Section 155 of the Education Act, which affiliate to Te Rūnanga Nui o Ngāā Kura Kaupapa Māori and abide by Te Aho Matua. Three were Kura Teina that were awaiting designation as Section 155 Kura Kaupapa Māori. Two of the Kura Teina were satellited to one of the identified Kura Tuakana. The Kura Teina were proposed as potential participants on the premise that a research project would contribute to the supportive network for small kura teina with a developing teaching and curriculum resource base, housed in temporary or partially completed school complexes.

One of the tumuaki and the principal investigator, with advice from colleagues at the Universities of Auckland and Waikato, and the Whare Wānanga o Awanuiārangi, then wrote a successful grant application to Ngā Pae o te Māramatanga, the National Research Centre of Excellence for Māori Development and Advancement. Following notification that the application was successful, the tumuaki involved in the writing of the grant application (who became a University researcher for the project and a PhD¹³ candidate) re-visited each Kura before the school year began in 2004 to discuss the running of the project.

The research project was exploratory and descriptive in nature with an intervention component. The research drew on cross-sectional and longitudinal design using quantitative and qualitative data collection methods. The design and methods helped to provide a basis for examining changes in kaiako teaching patterns and taura assessment results over time. The data collection methods used to collect kaiako observation data and taura assessment data will be described in detail in the sections 3 and 4 of this report. The project was collaborative in nature and involved Kura Kaupapa Māori located in rural communities or small rural townships in the northern part of Aotearoa New Zealand. The participating Kura were part of a research collective that

¹¹ Principals

¹² School(s).

¹³ The PhD project links into this project, focusing on Year three and Year four kaiako and taura.

included three researchers from The University of Auckland.

Teaching observation data were collected for a total of 21 kaiako. Reading comprehension and language data were collected for a total of 121 taura. Data collection occurred at four different times over 2004 and 2005. The data collection points were February/March and October/November of each school year.

Kaupapa Māori

The design and methods used in this project sat within a Kaupapa Māori research methodology. Kaupapa Māori research methodology in general terms is regarded as research for Māori by Māori, which is framed within Māori worldviews and which locates Māori understandings as central to the research process and analysis. Leonie Pihama (2001) describes Kaupapa Māori research as having both local and national aspirations, local in the sense of whānau, hapū and iwi (understood here as family, sub-tribal and tribal groupings); and national in the sense of multi-iwi and urban Māori. Important to Kaupapa Māori research is the desire and intention of Māori to represent ourselves. In that, Kaupapa Māori research is considered by many Māori researchers to be inherently political in nature. There is a growing body of literature regarding Kaupapa Māori theories and practices that assert a need for Māori to develop initiatives for positive change that are located within distinctly Māori frameworks (Smith 1999). Kaupapa Māori calls for initiatives and interventions that are generated within communities, acknowledging and drawing on Māori practices, knowledge, realities and the existing strengths located within those communities (Cram, 1999).

The research required competent levels of te reo Māori and Māori cultural fluency from all participants including researchers. Te reo Māori was a fundamental part of the project, as it is a fundamental value to all members of the research collective in the research relationship. All of the core research team had fluency in te reo Māori, Māori practices, values and beliefs were integral to the research process. All three University-based researchers on this project have whakapapa (genealogical) links to Te Tai Tokerau in which various participating kura are located and have actual kinship ties with many kura members. All three researchers have worked in and/or have children who have graduated from KKM schools and have a commitment to Kaupapa Māori schooling and to te reo Māori regeneration.

Practices and protocols such as hui (formal meeting), whakawhanaungatanga (actual kinship connections), whakawhitiwhiti kōrero (discussion and debate) underpinned how members of the research collective worked with each other and kept each other informed about the project's progress and about views held of the ongoing research process and its findings.

The researchers took data back to each Kura on at least four occasions. We discussed findings with its members who ranged from tumuaki¹⁴ and kaiako, through to parents, grandparents, members of board of trustees, administration and auxiliary staff and children. The researchers tried to ensure that we were carrying out a project with well-informed and highly-involved Kura. There were exciting and challenging experiences along the way and we continually found out that we could have done things better.

Kura report back and discussion involved the following:

Time 1 - mid 2004: data analysis

- Involved raising awareness about the patterns of kaiako interactions with tauira during literacy instruction and patterns across the first set of tauira assessment data

Time 2- pre 2005 school year: data analysis and Kaiako workshops

- Involved analysis and discussion the first year 'baseline data' set and carrying out workshop activities involving literacy instruction scenarios in which kaiako took roles as learners and as teachers

Time 3- mid 2005: data analysis

- Involved analysis and discussion of first set of 'intervention' data comparing and contrasting it with 'baseline data' collected in 2004.

Time 4 - early 2006 school year: data analysis and final discussions.

- Involved analysis and discussion of all four sets of data comparing and contrasting the two sets of 2005 'intervention' data with 'baseline data' collected in 200

¹⁴ Principals.

3. Ko ngā kaiako

One of the project's aims was to develop kaiako literacy teaching profiles. We wanted to find out what kaiako might do and why in their classroom instruction using non-fiction texts. Another aim was to develop collaborative learning opportunities for kaiako instructional strategies aimed primarily at supporting and improving students' reading comprehension and also at supporting Māori language development.

Kaiako participants

Teaching in KKM is a complex business and kaiako are a limited resource. One of the ways that this is reflected is in kaiako mobility. In 2004 there were kaiako changes in five of ten classes in which we observed at the beginning of the year. Two kaiako changes occurred across ten classes in the second year of the project. The changes were due to kaiako resignations or new staffing position resulting from increased enrolments. Kura tend to be small schools, reflected in this study by most of the kaiako teaching across more than one year level. The majority of kaiako who participated in this project were the only kaiako at a particular class year level(s). Kura kaiako are also likely to change levels that they teach, for example a kaiako could teach year 1 then year 8 in consecutive years, or even in the same year, depending on staffing availability. Linguistic and cultural demands add to the complexity of teaching in KKM. Many kura kaiako are second language speakers of Māori, only six of 21 kaiako involved in this study were identified as native Māori language speakers¹⁵. Maori is a second language for the majority of kaiako in this study. We already know that teachers find comprehension difficult to teach (Block, 2001). Trying to do so through a second language increases the challenge.

Reasons for kaiako participation in this study contrasted with those given for teachers involved in other studies of Māori literacy teaching and international studies of reading comprehension, in which teachers are often purposively selected based on expertise (e.g. Bishop et al, 2001; McNaughton et al, 2006; Block & Pressley, 2002). Kaiako agreed to participate as staff members of Kura identified for inclusion in the project and they taught in year 4 through to 8 classrooms. They reflected a range of language backgrounds, teacher education experiences;

¹⁵ Four of 15 kaiako interviewed were native speakers.

years in teaching and years of teaching experience in KKM (Appendix 1).

Three kinds of data were collected with kaiako,

- 1) classroom observation data,
- 2) interview/discussion data, and
- 3) kaiako group discussions at data report back sessions.

1) Classroom observation data was collected for 21 kaiako (14 women, 7 men) in total. In 2004 two full sets of classroom observation data¹⁶ was collected from 9 classrooms encompassing year 4 to year 8 taura¹⁷. In 2005 two full sets of classroom observation data was collected from ten classrooms. Classroom observations took place while kaiako were teaching prepared reading lessons.¹⁸ The lessons were video-taped to capture as fully as possible the interactions between kaiako and taura.

2) Fifteen of the kaiako took part in one-to-one semi-structured interview discussions (Appendix 2). Timing of the interviews reflects when kaiako began teaching in a target classroom and/or participating kura. An interview/discussion time was arranged with 11 kaiako who were observed at the beginning of 2004. Three kaiako who began teaching in target classrooms after time 1 collection visits were interviewed at the end of 2004 after the second set of classroom observation data was collected. One kaiako was interviewed after the third set of classroom observation data was collected at the beginning of 2005.

3) Nineteen of the kaiako for whom classroom data was collected participated in at least one of four data report back/discussion sessions that took place in each kura across the two years of the project¹⁹. Seventeen of the 21 kaiako attended a workshop session held in their kura at the beginning of 2005 before teaching began. In 2005 at least one of the report back/discussion

¹⁶ Observations were taken in ten classrooms at the start of 2004. However, due to significant staffing changes that occurred in one Kura, (3 out of 4 kaiako) observations were not carried out at the end of 2004.

¹⁷ Year 4 classrooms were in actuality Year 1-4 or Year 3-4 classes. Some classes changed in makeup from one year to next, e.g. Year 6-8 class in 2004 was a Year 7-8 class in 2005.

¹⁸ Prior to the observations kaiako were asked to: choose one non-fiction text or reader suitable for their class programme and year or group level; prepare (for Day 1) one 15-minute lesson introducing the text; and prepare (for Day 2) one 15-minute follow-up lesson using the previous day's text. In some cases we were only able to observe one session, due to e.g. kaiako absence, changes in teaching timetables, or other circumstances outside of our, or kaiako control.

¹⁹ In the case of one of the Kura, only 3 such sessions were held. We were unable to finalise a time for a fourth visit to the Kura.

sessions was audiotaped and transcribed for four of the five kura.

Year 1 2004

Classroom observations

While observations were made in ten classrooms at time 1, only the data collected for nine classrooms in which two sets of observations were completed are reported and discussed below. The nine sets of classroom observations provided a snapshot of kaiako practices for literacy instruction in the context of using a non-fiction text for small group teaching.²⁰ Classroom observations were analysed for kaiako strategic practices that focused on text meaning and taura comprehension of that meaning. What we were interested in was kaiako patterns of use that emerged across the different types of strategies categorised for this study.

The kaiako observation data were transcribed and the transcript data were separated into kaiako-taura exchanges. Kaiako utterances in each transcript were then coded according to the following categories of language and literacy measures: text related strategies (Prediction, Inference); language related strategies (Vocabulary, Māori/English language focus); talk related strategies (Extended, Elaborated); larger, encompassing strategies (Question and Feedback); and Kaiako Other. Choice of categories was informed by previous work that links such strategies to quality teaching, as discussed above. The development of categories drew on previous studies of reading instruction in English medium and Māori medium settings (McNaughton, Phillips & MacDonald 2003; McNaughton, MacDonald, Barber, Farry & Woodard 2006).

The categories used for coding are described in table 1 below.

²⁰ Not all kaiako were observed teaching small groups, some worked with larger groups of e.g. 15-18 taura.

Table 1. Definitions of categories used for transcript analysis

Kaiako turn (Kaiako)	an utterance or utterances made by the kaiako, bounded by a pause, by reading from the text, or by an utterance of another person in an exchange.
Tauira turn (Tamaiti)	an utterance or utterances made by a tauira, bounded by a pause, by reading from the text, or by an utterance of another person in an exchange.
Kaiako initiation (Initiation)	kaiako utterance that begins an interaction with a tauira
Kaiako Prediction (Predict)	Kaiako utterance makes or asks tauira to predict something about the text. <i>e.g. text and illustration focus on a closed closet</i> <i>Kaiako: 'He aha ngā mea i roto i tēnei kāpata?' What things are in this cupboard?</i> Or Kaiako makes a prediction for tamariki to consider, evaluate. <i>Kaiako: He taniwha pea kei roto i te kāpata? Perhaps there is a monster in the cupboard?</i>
Kaiako Inference (Inference)	Kaiako utterance makes or asks tauira to make an inference / propose a possible answer in light of information from the text and their own knowledge and experiences. <i>e.g. text focuses on getting ready for bed</i> <i>Kaiako: Me pehea ka mōhio ai koe ko te pō? How do you know it is night-time?</i>
Kaiako Vocabulary (Vocab)	Kaiako utterance focuses on: a vocabulary item (word) at the surface text level; asking for or giving a vocabulary item; the meaning of a vocabulary item (<i>see Table 2 below</i>).
Kaiako Māori/English language focus (Lang)	Kaiako utterance focuses on the language that is being used in an utterance (i.e. English or Maori); or on the meaning/translation of a lexical item or phrase from English to Maori or vice versa.
Extended talk (Extend)	A one-to-one Kaiako-tauira interaction that continues longer than 3 turns (i.e. longer than a simple IRE interaction), e.g. comments, explanations and descriptions.
Kaiako elaborated talk (Elab)	Kaiako utterance in which a word or section of text is commented on, explained, illustrated, before or after reading a word or section of the text.
Kaiako Question (Question)	Kaiako utterance in which kaiako asks a question(s).
Kaiako Feedback (Feedback)	Kaiako utterance contains information that evaluates, questions, reinforces/restates, clarifies, reworks, extends or elaborates a tauira utterance.
Kaiako Other (Other)	Kaiako utterance that does not focus on or directly relate to reading a text and/or gaining meaning about the text, e.g. classroom management, management of reading lesson such as finding or opening book, etc.

After an overall analysis of kaiako utterances based on the categories above, analysis then focused on utterances that were coded as the language related strategy Vocabulary; and those coded as larger encompassing strategies - Questions and Feedback. Questions, Vocabulary and Feedback utterances were given a rating of 1, 2 or 3 for the degree to which they connected with the meanings contained within the text that was being read/used in the lesson, using definitions summarised in Table 2.

Table 2. Description of ratings used for Questions, Vocabulary and Feedback

Questions	Vocabulary	Feedback
<p>1 Low 2 Medium 3 High</p> <p>Kaiako questions. Each question is rated for the degree to which it connects with gaining meaning from text at word, phrase, sentence or whole text.</p> <p>Low= little clear relationship/connection with meaning from text at any level. Kaiako: He aha? Kua pānuitia? <i>What, have [you read] it?</i></p> <p>Medium= some connection with text meaning e.g. Text focuses on what dogs are doing Kaiako: Oo, ngā kuri, kei te aha? <i>Oh, the dogs, what [are they] doing?</i></p> <p>High= clear connection to text meaning e.g. Text focuses on billy goats and a girl. e.g. He aha te mahi a ngā pirikoti ki te kotiro nei? <i>What are the billy goats doing to the girl?</i></p>	<p>1 Low 2 Medium 3 High</p> <p>Kaiako utterances that focus on a vocabulary item. Each instance is rated for the degree to which the vocabulary focus connects with gaining meaning.</p> <p>Low= focuses on text/surface focus, e.g. sound or letters in the vocabulary item e.g. focusing on ‘timotimo’ in text that tamaiti has read as ‘mitomito’ Kaiako: He aha tēnā kupu? E timata ana ki te mi, o te ti? <i>What is that word? Does it start with mi, or ti?</i> Tamaiti: Timotimo</p> <p>Medium= asking for or giving a vocabulary item e.g. text about catching eels Kaiako: He orite ēnei. These are similar (for catching eels). <i>(points to kupu written on whiteboard ‘hīnaki, eel pot kupenga, net pouaka box)</i></p> <p>High= asking for, giving or exploring meaning of a vocabulary item e.g. text about grubs Kaiako: Ko tā rātou kupu mo te ngangara ko te moeone. Arā ko tēnā tō rātou ingoa, Aborigines, ko te witchiti. <i>Their, word for the insect is moeone. Their name, the Aborigines’ (for the insect)is witchiti. (note - also ‘language focused’)</i></p>	<p>1 Low 2 Medium 3 High</p> <p>Kaiako utterance that responds to a taura utterance. Each instance of feedback is rated for the degree to which it contains information that evaluates, questions, reinforces/restates, clarifies, reworks, extends or elaborates a taura response or initiation (judged in terms of extending and elaborating taura turn and/or leading to further taura turn).</p> <p>Low= non descriptive and does not provide the child with any information 1 Lo – text/surface focus e.g. Pai / Rawe, ne?/ Kao. Ae. <i>Good / Excellent, aye?/ No.</i></p> <p>Medium= contains some limited information. e.g. text about catching kahawai e.g. Tamaiti: He kāroro tēnei? <i>Is this a seagull?</i> Kaiako: Ae, he kāroro tēnā. <i>Yes that is a seagull.</i></p> <p>High= elaborated feedback that clarifies and adds to child’s response. Includes kaiako correction of taura incorrect utterances; kaiako responding to taura utterance with a question. e.g. text and illustration focus on closed closet Tamaiti: He karapu? <i>A glove?</i> Kaiako: Ae, he karapu pea kei roto i te kāpata. <i>Yes, perhaps there is a glove in the closet.</i></p>

Reliability

Researchers undertook training sessions in coding classroom observations on three separate occasions across the two years (beginning and end of 2004 and beginning of 2005). Each

training session lasted between 1 to 2 hours. A selection of kaiako video-taped classroom observation transcripts (minimum of one page of transcript) was used. Following training, agreement of no less than 75% was reached between three researchers on a new selection of transcripts. Inter-rater agreement was computed by checking whether all three researchers agreed on each instance of coding kaiako utterances in classroom observations. A different coding by any of the three raters was counted as a disagreement for the coding of a kaiako utterance. Under these criteria 75% was considered high inter-rater agreement.

Results –Time 1 2004

The number of utterances made by kaiako under the categories of kaiako utterances described in table 1 above varied greatly. The pattern of frequency graphs, however, were more similar than different, as illustrated by examples of frequency graphs 2 to 4 below. The graphs show the frequency of utterances by category made by three kaiako from three different kura teaching in Year 4, 6 and 8 classrooms respectively.

Figure 2: Example of utterance frequencies for a Year 4 kaiako

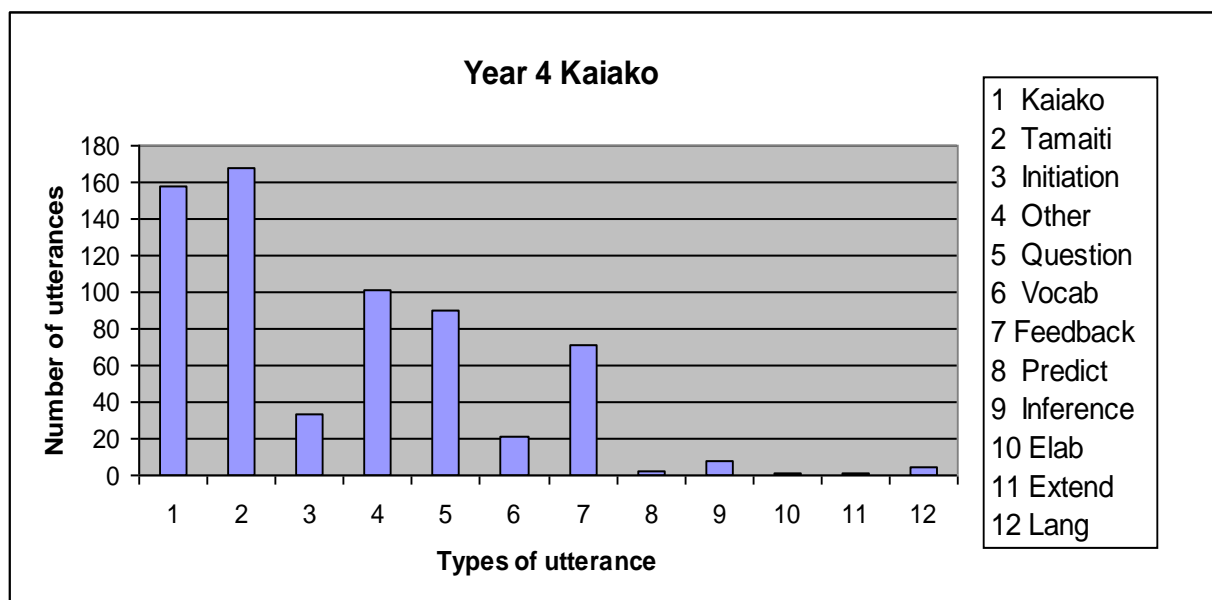


Figure 3: Example of utterance frequencies for a Year 6 kaiako

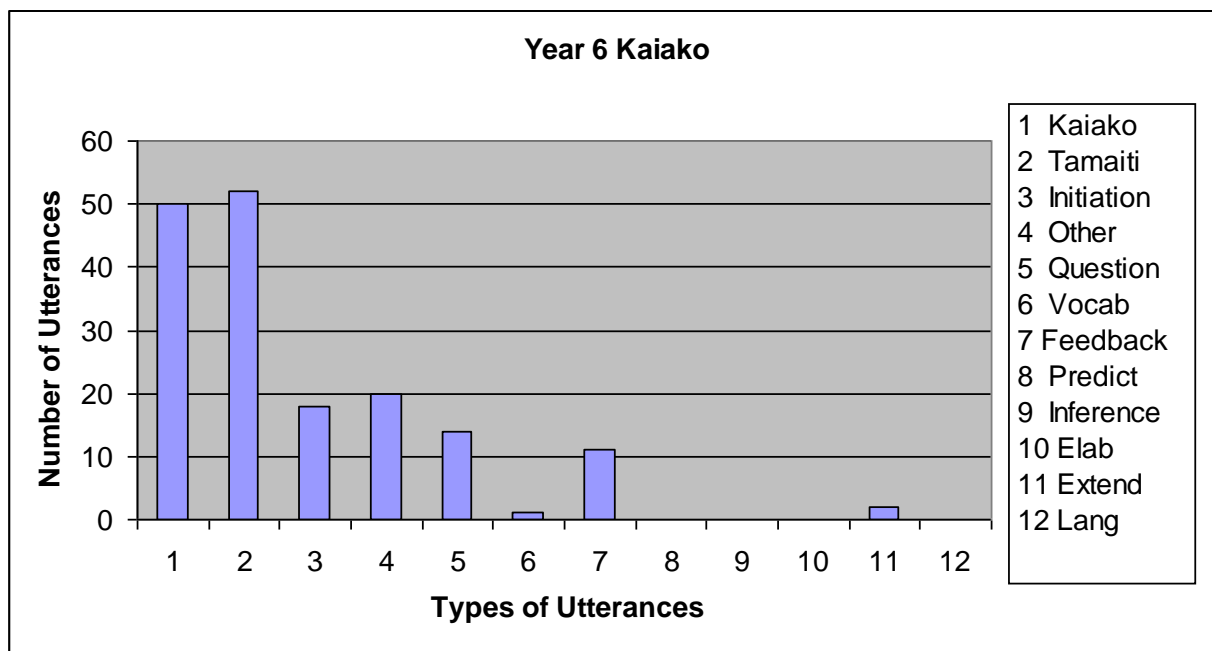
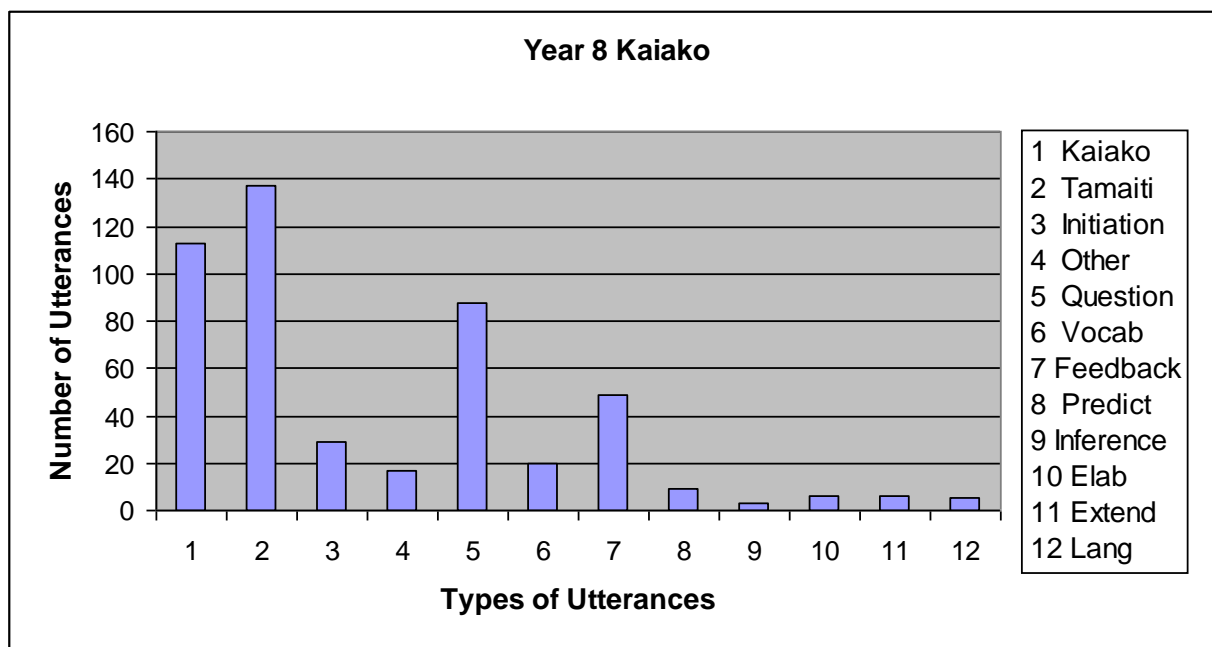


Figure 4: Example of utterance frequencies for a Year 8 kaiako



A noticeable pattern across kaiako, in their interactions with taura around text, was that there were few to no utterances focusing on prediction or inferencing from the text. When kaiako

utterances did focus on prediction, it mainly occurred while introducing a text and predicting what a text might be about from the title and/or pictures.

e.g. Kaiako 6 introducing a text by showing the book cover to a group of tauira.

Ko tēnei pukapuka, titiro mai ki tēnei pukapuka. Titiro. He aha ōu koutou whakaaro mō tēnei pikitia?.....Titiro, tino ataahua ngā toi nē. He pikitia tino ataahua.

There was greater variation reflected across kaiako in terms of patterns of utterances that focused on what we have defined as language related strategies. All kaiako focused on vocabulary items in the text. Four of the nine kaiako produced low frequencies of utterances concerned with vocabulary. Utterances concerned with vocabulary ranged from those with a surface text focus (e.g. syllabification of a word, or beginning sound of a word), to those focused on asking for or giving a lexical item (e.g. asking or giving a synonym), and through to those that explored contextualised meanings of vocabulary items in the text.

e.g. Kaiako (Year 7-8) discussing the meaning of ‘kaunihera’ from the text.

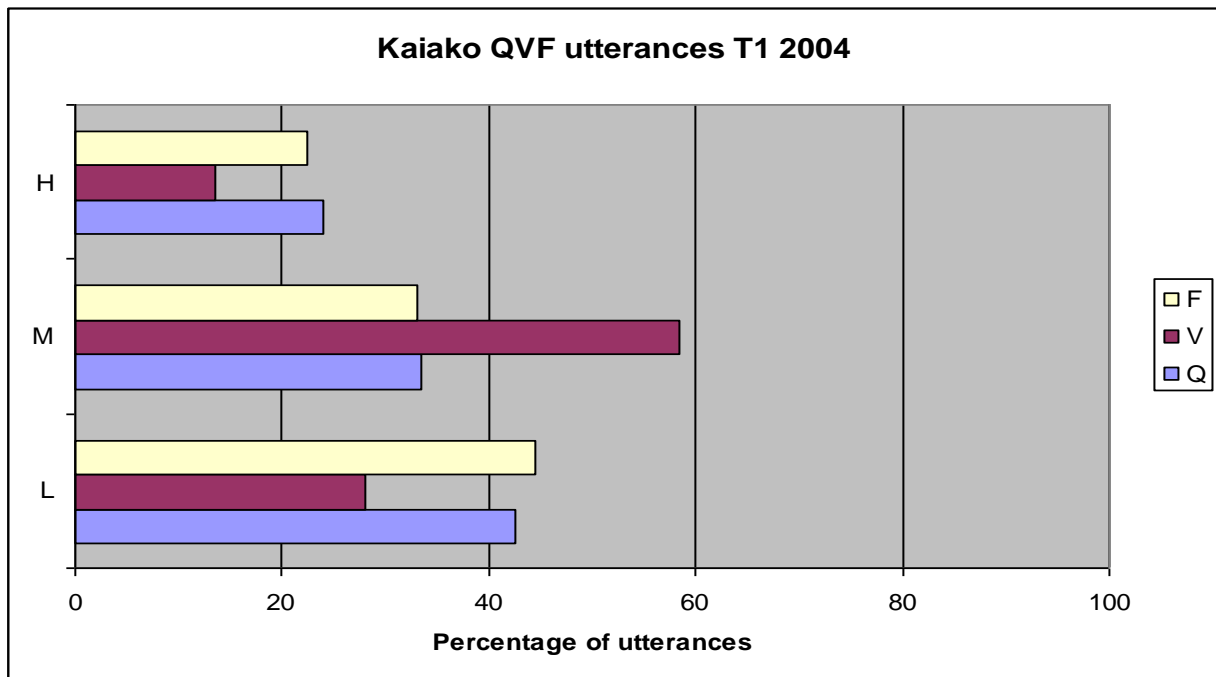
Kaiako: He rite te kupu kaunihera ki te tangi o te kupu Pākehā. Kei ā tātou tētahi kaunihera. Ko te Kaunihera o te Tai Tokerau, me kii The Far North, ne.
(The word kaunihera sounds like its English equivalent. We have a council. The Council of the North, the Far North.)

Tauira: Aah. (nods)

Kaiako: Tēnā te Kaunihera. Ka pai? He aha tētahi atu tikanga, kauni, o te kaunihera? He rōpū e whakahaere ana tētahi wāhi.
(That is the council. What’s another provision of the council? [its] a group that runs a region/area.)

Instances of kaiako utterances coded as Vocabulary were analysed, using ratings described in table 2 above, for the degree to which they connected with gaining meaning contained in text. In time 1 approximately a quarter of kaiako utterances that focused on vocabulary were concerned with surface text features, while only 12% are concerned with exploring contextualized meaning of lexical items in the text , shown in figure 5 below.

Figure 5: Time 1 percentages for low, medium and high ratings of kaiako utterances – Questions, Vocabulary, Feedback



The use of Questions and Feedback were strong features of all kaiako interactions with tairā during the observation lessons. For all but two of the teachers, at least half of the utterances made were questions. Instances of kaiako utterances coded as Questions were analysed in relation to the degree to which they connected with text meaning.

Figure 5 above shows that at time 1 over 40% of kaiako questions were rated low, that is nearly half of questions that kaiako asked were minimally connected to meaning in the text. Just over 20% of questions asked were highly connected to text meaning. Kaiako feedback was similarly rated in terms of how much information they provided that clarified and added to tairā utterances. Over 40% of the feedback given to tairā by kaiako was non-descriptive (e.g. the Māori equivalents of good, yes, right, you don't say?). Again the lowest proportion of kaiako feedback utterances, just over 20% of all feedback utterances, was found to clarify and add to tairā responses related to text meaning such as shown below,

e.g. High level feedback from kaiako in year 3-4 classroom during discussion of non-fiction text, drawing on picture in text to infer when a family has gone out to collect seafood.

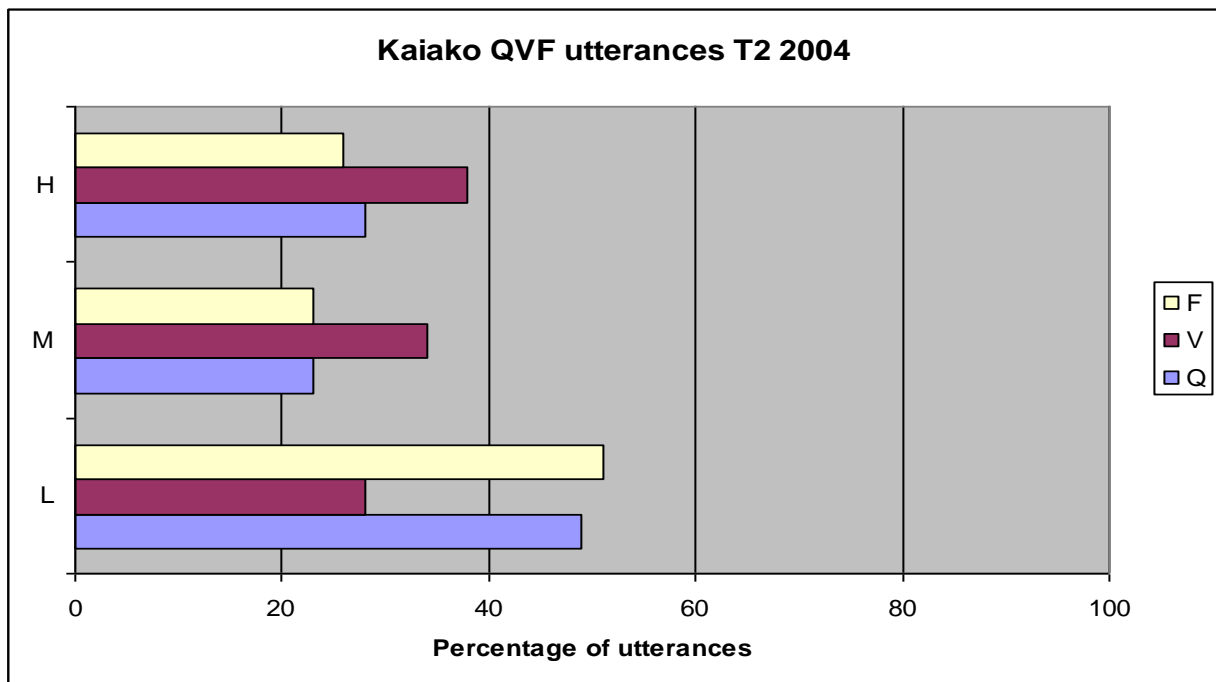
Tairā: He tai timu? (*The tide is out?*)

Kaiako: Ae, he tai timu pea, i te mea ka kitea nga toka me te rimuriumu. (*Yes, it's probably going out because you can see the rocks and seaweed.*)

Results - Time 2 2004

The patterns found in classroom observations for the kaiako utterance categories identified for analysis (see table 2) at time 1 were similar to those found in time 2. A closer analysis of Questions, Vocabulary and Feedback did identify some differences between time 1 and 2. One difference is that while the length of observations remain relatively similar (approximately 30 minutes observation of each kaiako), the numbers of kaiako utterances coded as Questions, Vocabulary and Feedback respectively were lower. Another difference is in the proportions of high-medium-low rated utterances for each category. The differences are seen across figure 5 above and Figure 6 below. For Questioning and Feedback, the proportion of utterances coded as high for these two categories has risen to become the second most common. In the case of Vocabulary, proportionately more utterances were rated high than medium or low for time 2 observations, a reversal of the time 1 pattern.

Figure 6: Time 2 percentages for low, medium and high ratings of kaiako utterances – Questions, Vocabulary, Feedback



Summary - classroom observations 2004

Classroom observations taken at time 1 and time 2 in the first year of the project provided a baseline snapshot of kaiako literacy instruction practices across year 4 to year 8. The patterns of strategies used were surprisingly similar across all but a few of the kaiako. We found that apart from three exceptions, kaiako tended to focus on surface text and surface meanings, compared with using strategies such as predicting and inferring, which have been linked to higher-level reading comprehension skills such as analysing, synthesising and evaluating. While kaiako made use of questions to help taura to engage with meanings contained in the text, the questions asked related to surface aspects of the text rather than demanding higher level thinking about meaning from taura. Similarly, kaiako feedback to taura tended to add little information to what their utterances how what they said linked to text meaning.

The degree of similarity of instructional patterns across kaiako teaching in classrooms from year 4 to 8 raises questions around the extent kaiako rely on practices that are relevant to students learning to read, rather than reading to learn. Questions around whether instructional strategies need to shift the emphasis from showing students how to read, which is important in the first years of schooling and literacy instruction, to showing students how to get meaning and make meaning from text as taura move into year 4 and beyond.

Interview/discussions with kaiako

The interview/discussion provided an opportunity to: gather some background information from kaiako (Appendix 1); to discuss their actual literacy instruction practices captured on video recordings; to gather further descriptions of their literacy instruction practices as well as their views of effective literacy instruction pertaining to comprehension development, vocabulary and language development. There were six main parts to the interview/discussion, which respectively focused on: choosing and previewing texts; introducing texts; developing children's comprehension; focusing on vocabulary items; follow-up activities related to reading texts; and monitoring and assessment practices. The interview/discussion was guided by the two video recordings taken of classroom teaching. Video recordings were reviewed by each researcher prior to carrying out an interview/discussion. Relevant video segments relating to different parts of the interview/discussion were jointly viewed and then discussed by the kaiako

and researcher. The interview/discussions took place after school or during lunch breaks, generally lasted 60 to 90 minutes and were conducted in either or both English and te reo Māori. The interview/discussion were audiotaped and transcribed.

Kaiako data is discussed under each of the six main parts to the interview/discussion. The analysis of the kaiako interview/discussions was largely qualitative and descriptive and involved identifying themes and patterns through reading and re-reading transcripts.

Results

1. Choosing and previewing texts

Kaiako were asked to explain why they chose the text they used for the classroom teaching observation and how they preview a text before using it for teaching. Differences in approaches to choosing and previewing texts emerged out of the transcripts in relation to the year levels that kaiako were teaching. Kaiako teaching lower year levels focused on aspects of the text such as level of difficulty, illustrations, and relevance to taura knowledge and experiences. Kaiako teaching at higher year levels tended to consider relevance of text topic to current topics or units of study across the curriculum. Kaiako explanations and descriptions reflect that kaiako focus on text characteristics that have been identified as important for 'learning to read' with regards to year 3 taura, and possibly through to year 5 taura. However by year 7 to 8 kaiako showed more concern about the content and information in a text, which arguably reflects more of a concern with 'reading to learn'.

Four of the six kaiako who taught in year 3 to year 5 classrooms focused on difficulty in relation to taura reading levels and looked at aspects such as unfamiliar words and sentence structures as part of previewing texts. Five of these kaiako also looked at whether the theme or kaupapa was relevant to units they were currently teaching or relevant to the experiences of the taura. Three of the kaiako examined illustrations in terms of how clear and appropriate they were in relation to the text. Only one kaiako described developing possible questions for teaching as part of text development.

Basic, easy text for them to follow, I make sure it's not too difficult a text for the children...something that's easily relatable... (Year 3-4)

First of all from assessments, nga pukete pānui haere, that's my guide first, their level...look for choices I thought was close to their personal experiences...I preview how clear illustrations are, sentence structures, new words in there (Year 3-4)

I find texts related to units, we've just finished Tangaroa and we've read nearly all the Tangaroa books. The other thing is that we had an incident in the kura the other day that involved two of the children in this group, I knew that the title of the book was really applicable for them and the title of the book really applicable for them. Mainly I make up questions that I'm going to use for the picture content... (Year 3-4)

...mō te kaupapa e haere tonu ana, mō te reanga o ngā tauira.... (Year 3-4)

...the kaupapa of the week, the focus of the book, the illustrations ... (Year 4-5)

Four kaiako taught classes that included year 5 to 8 tauira. There were no clearly identifiable criteria for choice across this group. One kaiako reflected on her choice of text for the observed lessons as “*perhaps it was too simple*”. Another said that she “*doesn't get to choose, [I] get given a book*”. The third kaiako noted that he wouldn't usually choose non-fiction texts for reading instruction. The fourth kaiako indicated that she assessed the difficulty of a text as she previewed it, “*I pānui the book... to see whether they can cope with it*”.

In contrast, four of the five kaiako who taught classrooms that only had year 6 to 8 tauira focussed on the theme, kaupapa or genre when choosing and previewing texts, e.g.

Pēnā, ka taea te hangaia ngā mahi katoa i Te Reo me Te Tikanga a Iwi ka tikina, rapuhia ngā pukapuka pēnā.

Two kaiako also took the level of text difficulty into account, with one taking into consideration vocabulary she was unfamiliar with as a guide for identifying vocabulary that might be unfamiliar to her tauira. The other kaiako also considered reading attention spans of her tauira:

We've been studying, each group at their own level, taonga puoro, so I thought I'd choose [a text about] that... [when previewing a text] I'm looking mainly at language,

whether or not they would be able to understand or comprehend the text. I actually use the words that I don't know in the text as a guide for me, because I think well maybe if I don't know them then perhaps [the taurira] won't know them. (Year 6-7)

I've got children in four groups so it depends on, ability. Sometimes I look at what we did the week before and try to get a different genre the next week. The length of the reading for one group in particular, they get put off if they think the story is too long... I look for common things that we'll be doing next week in other subjects, so Tane Mahuta, Hauora, all those sorts of things. (Year 7-8)

2. Introducing texts

The second part of the interview/discussion focused on how the kaiako introduced the text in the classroom teaching observation and discussed any other ways they introduce a text for the first time. All but two of the kaiako described introducing texts by asking taurira to predict what the text might be about from information shown on the cover or first page of a text. Only two kaiako went on to consider how predictions taurira might make could be linked back to the actual content of a text. This compared with classroom teaching observation data collected in the first year in which the few predictions made were rarely followed up with any kind of checking back while or following the reading of a text.²¹

All six of the kaiako teaching years 3 to 5 described introducing texts through questioning taurira about the cover and asking them to predict what they think the reading might be about from the pictures and/or title. The descriptions contrasted with classroom observational data in which rates of kaiako utterances categorised as predictions were generally minimal to non-existent. Explanations for this strategy ranged from cover illustrations acting as scaffolds to meaning for children learning to read, through to with ensuring that taurira know the name of the book so that they would be able to find the book again if they needed to.

...its not completely alien to them an using [the cover] is a way of introducing...asking the children what they think the pictures represent... or what inside of the pictures is good for the children who don't have a lot of pre-reading skills...haven't got a lot of

²¹ Similar patterns re teachers' use and follow-up of prediction have been found in other studies carried out by the Woolf Fisher Research Centre.

*knowledge of the pu Māori so they can't actually figure out what the text is saying.
(Year 3-4)*

Ka timata ki te uwhi, te ingoa o te pukapuka, na te mea ka wareware ratou. Mehemea ka rapuhia he pukapuka, ka mohio ratou kia whakamohio i nga waa katoa. (Year 3-4)

*...usually I let the children predict....the introduction of the story with the cover is just to get their thoughts about what they think the story is going to be about
questioning the children's whakaaro about the illustration on the front cover (Year 4-5)*

One kaiako added a different slant to introducing a text, by discussing how he introduced texts to parents, not to his students. Taura took readings home to be read to, with or by parents. Translations of words considered likely to be unfamiliar were sent with the texts and parents were encouraged to identify words that they or their child didn't know.

I tell [taura] this is their book and I want them to read with their parents and I don't tell them what the kaupapa is, it's for them to discover, ne? If I tell them the story its like telling me a movie [before watching it] and you don't want to know...and they've got to write down all the new words....or even [words] that the parents are not sure of...then I send it back with the meanings for the parents cos [the taura] can't read English... (Year 3-4)

Four of the five kaiako teaching in classrooms that included taura from years 5 to 8 described how they introduced a book by asking questions about the front cover, such as the author, title or illustrator, or asking taura to predict what the text might be about from the title and/or illustrations.

what I do is write down the kupu hou and [the taura] write a story about each, what they think each word means, a sentence. (Year 5-6)

One explained how she might also introduce a text by linking the content to taura experiences.

he aha te ingoa, Nā wai? Just the basics, nā wai te kōrero, nā wai ngā pkitia. Looking at the pictures maybe ki te awhina i a ia.sometimes relate [reading] to their own

experiences so I can kōrero to them about it and then haere ki te kaupapa so that they're in their whakaaro.. (Year 5-6)

Kaiako teaching across years 6 to 8 showed a similar pattern; three kaiako described focusing on predicting content using covers, illustrations and titles, e.g. *“asking questions kia whakaputa mai i ō rātou māramatanga” (Year 7-8)*; one kaiako described focusing on new vocabulary *“a lot of front loading of words” (Year 6-8)*. Two kaiako discussed the need to link taura prediction of text content back to actual text content. These kaiako also said that sometimes they would either just read a text or get taura to read a text with no introduction.

To titles, authors, it's really getting back to basics with this group, where's the heading where's the author?Sometimes I've just actually read it. Predictive activity prior to getting into the text. ...I still want to bring them back to the actual issue rather than accept... every response... I want to be able to bring them up rather than letting them carry on predicting and giving answers that are perhaps fine when you are six but not when you're eleven. (Year 6-7)

Two reasons [for asking them to predict from title and first illustration] just to see if they could derive some information just from the images and the title, but also, I wanted to link it back... and reflect and critically analyse whether or not the pictures, the images and the title actually connected that well to the story.... Sometimes I have them just read through themselves. (Year 7-8)

3. Developing children's comprehension

Examples of kaiako focusing on children's comprehension of a text video-recorded for the classroom teaching observation were viewed by the kaiako and interviewer and then discussed. Kaiako were also asked to describe other strategies they might use to help taura gain meaning from a text. Kaiako working with younger taura tended to focus on illustrations and connecting text content to taura prior knowledge and experiences. Kaiako working with more older taura focused on: the significance of vocabulary development and writing activities for comprehension.

Two of the kaiako teaching year 3 to 5 taura described using illustrations as a prop for comprehension, e.g. *“when you read you look at the picture and the picture usually shows what*

it will say” (year 4-5). A year 3-4 kaiako asked taura to explain a sentence or section of text that they read in their own words as a means to check whether they understood what they read or were they merely decoding, “trying to see did they comprehend it, its like, if they can read it, did they get any meaning?”. Another year 3-4 kaiako described using texts that followed a repetitive sequence as a strategy to help support comprehension, while the remaining kaiako believed that the kind of questioning used impacts on comprehension, stating that:

When I was at training college it was drummed into our heads [by a lecturer] that if you want to ask a question, if you really want them [students] to respond to whatever you want from them, you always ask an open question, like questions upon questions.... I just try and bring it out of them slowly with question upon question. And also praising and acknowledging what they have to say. (Year 3-4)

Two of the kaiako working in classrooms that included taura from years 5 to year 8 described connecting text content to personal experiences as a means of supporting comprehension, e.g. *sometimes I’ll see if they can relate that story to them personally (Year 5-6).*

A kaiako who joined the project after time 1 data collection explained that after participating in a report back session as a new staff member she had incorporated retelling as a strategy to support comprehension,

I think that the research has highlighted that these things are key ingredients for better literacy with our children, their comprehension and their understanding. ...I might end up getting them to retell the story... they weren’t doing this before so for them to be retelling the story in their own words it’s quite a new concept.... From getting them to go from doing this [moved body to indicate non-verbal communication] to actually getting them to talk now has been a big thing that I’ve seen. (Year 5-8)

Another kaiako identified vocabulary development as a critical element for comprehension development, stating: *ko te mea nui ko te hiki tō ratou nei vocab. Horekau he vocabulary kore e taea. Mā roto kē te pānui, ka puta mai (Year 5-8).* A kaiako teaching year 6-7 taura expressed similar concerns about vocabulary development, and also reflected on how her being a second language learner of Māori impacted on her use of questioning as a strategy to facilitate comprehension:

The biggest challenge I've found is the vocabulary or the lack thereof that they actually acquire. We do a lot of kupu hou with our reading activities, as with our science, maths, yeah sort of everything. I ask questions. The thing is what I've found really hard since I've been working in Kura, is in a mainstream I can just ask the questions...I'm not yet at a level where it just flows in terms of te reo Māori... I break down because quite frankly I don't know how to ask, I know in here what to ask but I can't always express it...

Two of the kaiako teaching year 7-8 classrooms discussed how they used activities and worksheets as a way for taura to show how they comprehended texts:

I want them to put it down on paper... getting them to display their comprehension... a venn diagram or a story board.

The activities that we do ...identifying the main parts, doing a comprehension worksheet the next day about what the story is about... some of them are really good, others might miss a vital part of the story and they've lost the rest when they've read it.

4. Focusing on vocabulary

Kaiako were asked to discuss how they had focused on vocabulary during the classroom teaching observation and to describe other ways that they might focus on vocabulary. Kaiako who taught in classrooms that spanned years 3 to 5 discussed a range of strategies. Kaiako teaching years 6 to 8 mainly used written resources to help their taura to understand unfamiliar words.

One of the year 3 to 5 kaiako identified words that might be unfamiliar or high interest, and discussed those with taura before and while reading a text:

Because a lot of our children are second language learners they haven't got a huge baseline that they are drawing from. So if the word is foreign to them sometimes they miss out the meaning of the whole sentence because of that one word. By isolating that word and finding out what it is and asking them for the meaning first..... I'll ask

what their interpretation of it is [if] they've heard the text. {If} I know there's a lot of interest words... we'll do the interest words before we even start reading it so the story isn't lost on them.

Another kaiako physically demonstrated meanings of words as a strategy to discourage taura from resorting to English to explain words.

I do [physical] demonstrations if they don't know a kupu....because they speak two reo my fear is they give it in English....kia mau i a rātou i roto i te reo Māori. I said look its always good to ask and they ask... sometimes they say 'Pāpā he aha te mea? I tell them what I think it is and then you see the blank look on their face, the penny hasn't dropped and then I act it out. (Year-4)

Two other kaiako used word study activities (e.g. work with synonyms) to help develop vocabulary, e.g. *'he aha nga kupu e rite ki tēnei kupu?getting children to recall kupu orite... actually is building their vocabulary'*. One of these kaiako involved homes and parents with such activities, explaining:

So we find different meanings for these. .. they take words home to kōrero with their parents....we're using [the new words] all the time, stirring, whakaranutia that was a new word, that was to go home to use it when they cook, when they help.

One kaiako described across this group of taura using illustrations, saying *'I always ask them to look at the picture, aata titiro ki te pikitia kia tae koe hei kinaki ki te whakaputa'*.

Two kaiako teaching years 5-6 and 5-8 respectively got their taura to identify and write down words they didn't know and then try and work out meanings in the context of the text:

...identify and write down words they don't know, trying to work out meanings in the context of the text being read "what does the word meant to you?" I look at how they perceive that, because we would have read the story when they found the new words.

ko te tikanga o te kupu hou, mo ratou ko te tuhituhi, kia wānangatia, ne. Kia wānangatia kia rongu e ratou te wairua o te kōrero.

All five kaiako teaching across years 6 to 8 got their taura to use dictionaries and glossaries

to find out the meanings of unfamiliar words. One also described how native speakers in her whānau were used as resources to understand new vocabulary:

Use the dictionary, or I'll get them to ring my Nana, ... sometimes it's not in the dictionary,.. so I get them to ringi atu ki a tupuna.

Two of the kaiako also discussed how they addressed dialect aspects, e.g. '*Kia mārama ai rātou ehara i te noke ki a tātou, he toke... ehara nō kōnei*', or language aspects when focusing on vocabulary with their taurira:

I encourage them to be able to explain things in Māori as opposed to switching to English and quite often I'll ask what the meaning of a word is and they'll give me an English word that's not the meaning. I encourage them to give me an explanation about the word as opposed to the English equivalent.

5. Follow-up activities related to reading texts

Kaiako were asked to describe the kinds of activities that might use to follow up lessons similar to the ones that were videotaped. Many of the kaiako had introduced and discussed such activities when interview/discussions considered comprehension and vocabulary. An additional activity described by three kaiako in year 3 to 5 classrooms, and one kaiako in a year 5 to 6 classroom involved putting parts of sentences and/or sections from the text into the correct order, e.g. *photocopy the book and cut up the sentences to see if they can put sentences together using the book as help (year 3-4)*. Four kaiako whose classrooms collectively spanned year 3 to 8, used activities that involved writing about reading texts, e.g. *write something about the story and publish on the computer (year 5-8); make powerpoint presentations (year 6-8)*.

6. Monitoring and assessment practices

The final part of the interview/discussion focused on how kaiako monitored and assessed reading comprehension and te reo Māori in their classrooms. All but three of the kaiako used identified running records or 'Pūkete Pānui Haere' (Rau 1998) as being used to assess reading comprehension, e.g.

I set 5 questions for my running records. And generally when I'm doing the 5 questions I will get them to read the story again silently. The first time we've done it together. The second time I say I'm going to ask you 5 questions about how well you understand this story. ... So I'll go into 1 recall, the junior levels do 2 or 3 recall, recount questions, of what they see and identify in pictures and text. Then I do one I suppose it's a question that extends their thinking, I try to do one that's a bit more, deeper thinking... the first time this year I went to Cath Rau, Mere Berryman's benchmarks, Kete Kōrero.

Six kaiako from two different kura reported that running records were collected school-wide by one staff member either at the beginning of the year or each term. Kaiako were asked the ways assessment information was used, however while kaiako said that the data was looked at to e.g. *see how to improve on comprehension' (year 5-6)*, how this assessment data was used was not explicitly explained during the interview/discussions. Kaiako described using running records in conjunction with other assessments for reading comprehension, including formative assessment during classroom teaching, marking homework tasks, e.g.

... formative assessment, check homework, school wide running records, look at these to see how to improve on comprehension (year 5-6).

You take a lot of gauges as a teacher, after reading once the children are doing their activity from the shared book we sit down in groups and I listen to two groups per day... I'm using different observational techniques to see what the children are understanding and taking in, and we also do running records for every child at least twice a term so we can see how the children are doing, from the comprehension activities that are joined to it (year 3-4).

Kaiako from two kura explained that AsTTle assessments in reading had started, one kaiako described how results the kura had received were discussed by the Kura staff as a group and used to identify areas for them to focus on, saying

[We were] all given individual information for our own tamariki. The whole school has looked at the information together. We look at all the graphs. [Tumuaki] has all the graphs so we put them up and see, okay this is where we need to work. We have got to go back and, okay how are we going to do it?

Kaiako described a range of ways that they assessed and monitored te reo Māori of their taura. Four kaiako used Te reo Māori i roto i te Marautanga (Te Tāhuhu o te Mātauranga 1996) as a base for developing assessments e.g.

I haven't got one at this stage [te reo Māori assessment]... again you go back to those whenu [in the Marautanga] whakarongo, kōrero, pānui, tuhituhi and matakitaki whakaatu. I think if you are working within that scope and you go back to your achievement objectives, me hoki tonu koe ki ngā whaingā paetae, i oti pai tērā aromatawai (year 3-4).

Through the te reo document. Because its already at their koeke and what they should be using in the te reo document. We're looking for others (year 5-8).

For me, I go back to the Māori document and look at, we've got the achievement objectives and we break them down.... We're not standardised in terms of getting a standardised thing that some other kura might have. We make up our own basically. We have an assessment sheet, like our code is really simple. It's like 'timata', 'ahua matau' and 'matau'.We look at different aspects [written, spoken (year 6-7).

Besides the kaiako just above, five other kaiako also described assessments that had been developed by themselves or in the kura. The assessments drew on formative and formal observation and one kaiako described how they also collected information about te reo Māori use in the home.

We have tests...when the children first enter school we have them tested to distinguish what level of te reo Māori they've got and also what they've got at home as well. ...At the end of the term we'll do the test again to see if the children have improved (year 3-4)

A fluent speaker actually sat in on interactive kōrero (amongst the taura during play intervals etc.) and wrote everything down...we took the interactive kōrero mainly because it was away from a guided situation That was them in their natural situation without any adults supervising. we had identified [some taura] had come in [to kura] with limited reo. So we had to really boost the reo level for them. What [fluent

speaker] did was write down everything that he heard these children using in the first term. Then we analysed that...

[with 7 and 8 year olds] what we did was took a sample of their kōrero in the morning recount, retell. So we took a taperecording of those children.... Just recently ---- came in and got us videoing the children and their kōrero because one of our objectives was ngā pātai me ngā whakautu o ngā tamariki (year 3 and 4).

...for each child, pai te rere o te reo, mārama te whakaputa i ngā kupu kōrero, reka ō tōna reo kōrero, those sorts of things I've just finished looking at that. Pai i te reo, whether it's, you know, how they stop, think again, ae and away again. Whether it's flowing. Mārama, e mārama ana he aha ō wāna kōrero, mō te whakahua i ōna kupu. [showing where the assessments are noted down] I'm going to put them together; it's for part of my reports (year 7-8).

Data report back and workshop sessions with kaiako

A report back session was held at the middle of 2004 and a workshop session was held in each kura in January 2005 before the new school year started.

Data report back sessions

Following the analysis and rating of data collected at time 1, each Kura was visited in the middle of 2004 for a report back session. Each Kura was also presented the observation data collected for kaiako from their respective Kura, along with combined observation data for all kaiako participating in the project. Discussions that took place provided opportunities for kaiako to start thinking about and critiquing their own literacy teaching practices. Some of the kaiako described using video recordings of their classroom teaching taken at time 1 as an opportunity to watch and reflect on their practice, and in a few instances to discuss their practice with colleagues and members of the wider school community. While the potential ramifications of this may not sit well in a 'purist' view of research that incorporates baseline and intervention phases, they sit well in a Kaupapa Māori view. What this means is that changes in ratings of Questions, Vocabulary, Feedback kaiako utterances from time 1 at the beginning of 2004 to time 2 at the end of 2004 (see figures 4 and 5 above) may have been partly effected through sharing and discussing classroom observation data with kura whānau mid 2004. However as researchers working within a kaupapa Māori framework, we research to help ensure outcomes that contribute to the educational and cultural wellbeing of our children and ourselves, rather

than to ensure the wellbeing of research in itself.

The results of tauria assessments (discussed in the next chapter) carried out at time 1 were also discussed with Kura. The assessment results for all tauria across the five Kura participating in the study, and a breakdown of how each year group performed across the different components of the assessment, were presented and discussed. Kura were presented the year by year results for their own respective tauria. This gave Kura an indication where their tauria scores fell in relation to the total group of tauria at each year level.

Workshops

A workshop was held at each Kura at the beginning of 2005 to present baseline data collected at time 1 and time 2 and to workshop some reading activities. Information about patterns of kaiako-tauria interactions during classroom observations was presented and discussed with each Kura during the workshops.

Given that classroom observation data collected in the first year of the project found similar patterns of strategies across all but a few of the kaiako, that kaiako tended to focus on surface text and surface meanings in their questioning, feedback and focus on vocabulary we decided to develop workshop activities aimed at increasing and adding depth to kaiako focus on text meaning. We wanted to use sharing what they were already doing across the group as a teaching resource, similar to an approach used in Hohepa (1999). Kaiako participated in workshop activities using predicting and inferencing instructional strategies with written texts. The activities included kaiako taking the role of learners in role-plays facilitated by one of the researchers, who modelled different kinds of questioning with a text, including recall, predicting and inferencing. Kaiako developed different kinds of questions and cloze exercises for supplied texts in English and in Māori. Kaiako also role-played how they would approach unfamiliar vocabulary in a text when teaching.

Year 2 2005

Data report back/discussion sessions with kaiako

In 2005 at least one of the report back/discussion sessions was audiotaped and transcribed for four of the five kura. The two extracts below reflect how the report back/discussion sessions provided opportunities for kaiako at each kura to share and discuss their individual and/or

school-wide literacy teaching practices with each other. The sessions also provided a strong context to focus on the significance of text meaning and comprehension in their practice. The first extract below is taken from a kaiako discussion in a small kura (less than 60 taura) the focus is on the school-wide approach that was developing and how this was impacting on aspects of their prior knowledge of reading instruction.

Kaiako A I think we, our system in the school that we use is to read for meaning because without the meaning they have got nothing, what good is reading going to do us. So we are really looking at the comprehension of new words, new kupu, and once again we go back to the whole sentence structure so that the kids aren't taking it out of context. Also with the comprehension we are bringing in the knowledge and the inference questions which we have been doing in Whakawhanuitia [project]. And bringing their own personal experiences to highlight what the [story is about] comprehension of the story. If they have got something that they can relate to, they can look at the story and what it means and bring it back to their own life as well.

Kaiako E Keep reading with them and getting their ideas, or if they understand it. Feeding back, you're feeding back to them whatever that scene is all about and then you can see whether they are actually understanding. Questioning them a lot on whatever that story is all about. Giving them some kupu, [checking] if they are understanding the words. Explaining [that there] might be two meanings, three meanings to whatever the words are.

Kaiako A So how we used to do the cloze activity [before the project started] was the way we were all taught I think in training college, and every third word you leave out. But one of the approaches that we learnt through this system is, it doesn't have to be every third word, it can be a crucial word that holds the meaning of that story...

In the second extract below taken from a kaiako discussion at one of the larger kura (over 200 taura), staff shared how they previewed a text and prepared for teaching. Discussing their individual practices provided opportunities for kaiako to compare what they each did and also

how their practices might take into account the year levels they taught as well as their own Māori language fluency.

Kaiako A I take my book home, my shared book for the week, for example. And I look at the things that, because I already know what I'm looking [for] in my book to do, at the new entrant stages. I'm just teaching them to read from left to right...and I look at some punctuation in the pukapuka; pūmatua, irakati, and maybe tohu kōrero, tohu pāatai. And I'll just focus on those things. I look at the pictures; I look at what I can see in the pictures and maybe what they can see out of that. But [I] spend quite a lot of time on it, because the babies can get so much out of one picture. ..

Kaiako E Like me, I try to do the same as Whaea A, take mine home. I have about four different groups in my class. I take all the four books home but, it's just reading through it, memorising every book, looking at the pictures. Getting support text for them, especially for the higher groups, getting a video that may relate to that group, to help while I'm working with one group so that it flows and I give them questions. 'Ok, this is what I want you to look at' if they are watching a video. So if they have their questions and their whaingā paetae down, so they know what they are looking at, what they have to get in that video. And then maybe one group will have a different, another activity but with all their whaingā paetae. They have different things so that by the time I get to them they should have half of the work mostly done before I talk about the book.

.....

Kaiako O I am looking at the volume of text and whether that text actually, mena e hangai tonu ana ki ngā pikitia nē. Etahi pukapuka, ka titiro koe e rereke ngā pikitia ki ngā kupu nē, ki te ia o ngā kupu. So I try to find out whether they match, the picture matches the kōrero so that they are not, what's the word, rangirua.

.....

Kaiako U Previewing texts, I agree with what everyone said. But at a higher challenging level and I try and find books that are relevant, that will capture them especially because I've got the year 6s. At that age I really

don't mind if, mena e rereke ana ngā pikitia ki ngā kōrero. Pai wēra mō ngā mahi ngohe mā rātou, ngā pikitia me ngā kupu, ngā rerenga kōrero, karangatanga, wēra mea katoa.

.....

Kaiako I Tētahi atu mea, when I did it I wrote all my questions down so that I could review every question I had, what I wanted for recall. I looked at the quality of my questions, I wrote them all down the whole lot to fit in so that I also practised with the book so that when I read a book, if I was to read a spot I'm going to make it as interesting as possible.Because I am a second language person with Maori books, that's one of the big things that I always do, make sure that I had lots of questions that I could use, you know, because sometimes when you are sitting there you can't think [of] questions.

(Agreement from others)

And one of the other things I had questions for, I previewed what kupu I wasn't too sure about [and] that I knew they [wouldn't be] too sure about. So then we had one of studying kupu with questions. I didn't tell them what it [the meaning] was, we questioned every which way till we found out meanings of different things. Then when they read it they had some understanding of what [the text was about]. But it's just the art of questioning and how deep [the meaning is that] you get out of the text, that's my whakaaro.

Previous studies have shown the potential for change that can come about when researchers discuss data with research participants (Hohepa, 1999; Lai et al, 2003). Currently professional development and learning opportunities specifically targeted to Maori medium educational contexts are limited. The data report back/discussion sessions involved working with kaiako of each kura in the analysis of learning and teaching data as well as sharing and discussion of teaching practices. Many of the discussions not only involved staff, but also other kura whānau members, such as parents and grandparents, board of trustees members, administration staff, caretakers and tamariki (not necessarily attending the kura). As such, the project involved taking a particular whole school approach – whanau-ā-kura ('school family') which is integral to Kaupapa Maori - to improving literacy instruction, on a Kura by Kura basis, through

information sharing and collaboration (Morrow, Gambrell & Pressley, 2003). The approach used provided opportunities for contextualised professional learning that extended through to the wider kura whānau and community. What we now needed to find out was whether the discussions of classroom observation data and kaiako practices were accompanied by shifts (qualitative and/or quantitative) in teaching practices in the ways that they reflected strategies that have been linked to effective literacy and comprehension teaching.

Classroom Observations

We observed in 11 classrooms at the beginning of 2005. However we were not able to complete observations for two of the eleven at the end of the year. The results presented below are drawn from the nine sets of full data that were collected. Different kaiako were observed in two of the classrooms.

Results

The classroom observation data collected at time 3 and time 4 reflected that in the second year of the project there were still generally low levels of kaiako utterances coded text as predicting. One class set of data reflected a small increase in rates of prediction (year 6-8), data from a year 3-4 classroom showed a substantial increase. Data from four classrooms spanning years 3 to 6 reflected a slight upward trend in rates of utterances coded as inferencing.

Figures 7 and 8 respectively show percentages of kaiako Questions, Vocabulary and Feedback utterances that were rated as low, medium and high at time 3 and time 4. The figures show that the percentage of kaiako utterances coded as low dropped for Questions, Vocabulary and Feedback. The percentage of kaiako utterances coded as medium fell approximately 5% for Questions, rose by over 10% for Vocabulary and remained the same for Feedback. The percentages of kaiako utterances coded as high rose nearly 8 to 10% for Questions and Feedback, but decreased by 8% for Vocabulary.

All but one of the nine sets of classroom observation data showed increases in the rates of questioning and feedback that focused on deeper text meaning. Changes in rates of vocabulary related utterances were more mixed. Three sets of data showed a drop, one an increase, and four sets reflected little or no increase in the rates of kaiako utterances coded as Vocabulary that focused on deeper text meaning.

Figure 7: Time 3 percentages for low, medium and high ratings of kaiako utterances – Questions, Vocabulary, Feedback

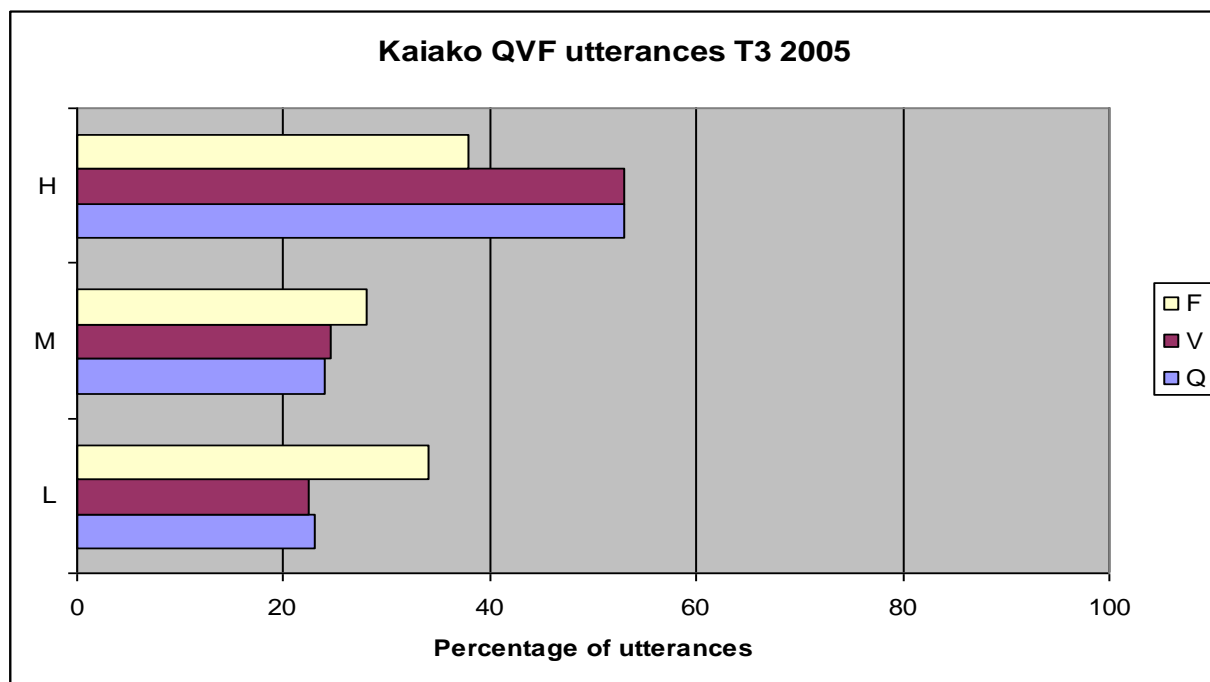


Figure 8: Time 4 percentages for low, medium and high ratings of kaiako utterances – Questions, Vocabulary, Feedback

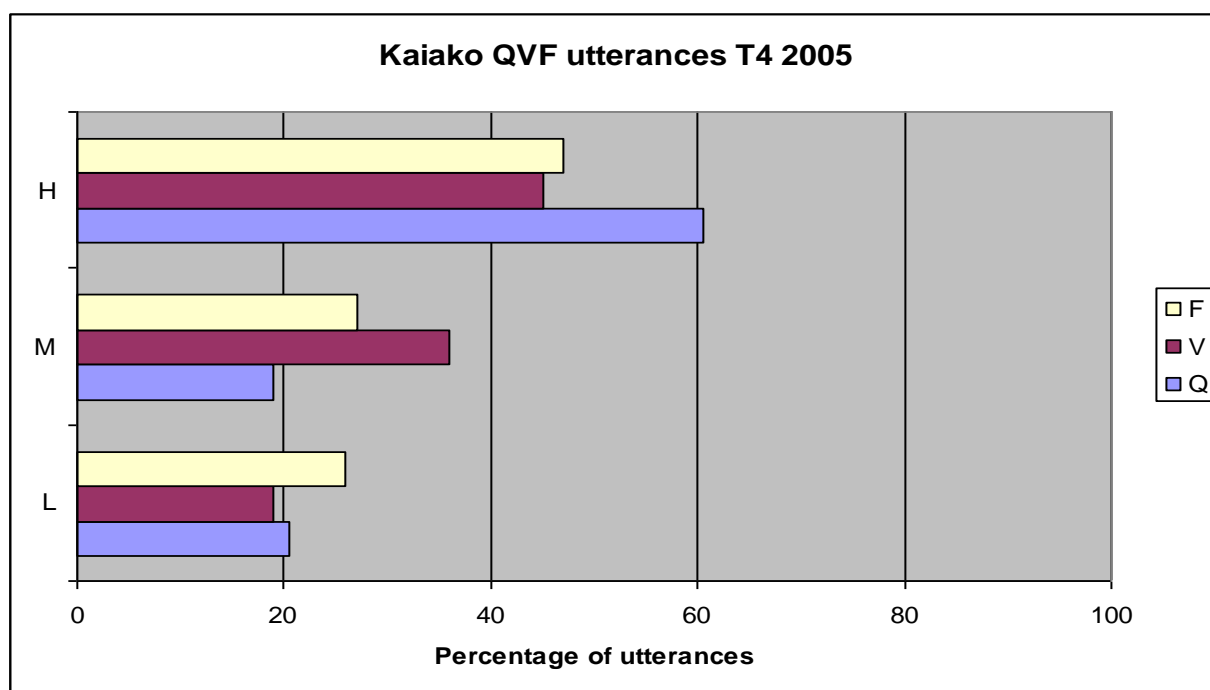


Table 3 below compares the percentages of kaiako Question, Vocabulary and Feedback utterances that were rated as low, medium and high at time 1 and at time 4. Looking across the beginning to the end of the project shows that for Questioning and Feedback the patterns of low, and high utterances were reversed. What the table reflects is that at the end of 2005 kaiako were much more likely to interact with taura around text that focused on meaning than had been the case at the beginning of the project. The percentage of such utterances coded as low dropped for each category by at least 10% to over 20%. Correspondingly the percentages of utterances coded as high rose by between 24% and 32%.

Table 3. Percentages for low, medium and high ratings of kaiako utterances at time 1 2004 and time 4 2005 – Questions, Vocabulary, Feedback

	LOW		MEDIUM		HIGH	
	<i>Time 1 2004</i>	<i>Time 4 2005</i>	<i>Time 1 2004</i>	<i>Time 4 2005</i>	<i>Time 1 2004</i>	<i>Time 4 2005</i>
Q	42.5	20.5	33.5	19	24	60.5
V	28	19	58.5	36	13.5	45
F	44.5	26	33	27	22.5	47

Summary

What we found was that opportunity for kaiako to receive and discuss information about their teaching practices discussions of classroom observation data and kaiako practices were accompanied by some shifts in teaching practices. Classroom observation data reflected minor increases in the use of prediction and a greater increase in the use of inferencing by kaiako. There was a strong qualitative shift in relation to kaiako use of questioning and feedback strategies that showed high engagement with meaning, and a decrease in kaiako talk that focused on surface vocabulary meaning. The question that arises now did any noticeable changes in taura reading comprehension and te reo Māori (as measured by the project assessment) occur, and if yes what were the nature of the changes?

4. Ko ngā tauira

The tauira participants were drawn from year 4 to year 8 class levels of the five participating kura. The project began with 154 tauira from a potential cohort of 251 for whom informed parent consent to participate was obtained. Information pamphlets and requests for parent/caregiver consent were sent home via the kura and parents were able to contact the kura or the university researchers if they had any questions. One hundred and forty seven tauira were assessed during the first data collection time using measures developed specifically for the research. By the end of the project full sets of data were obtained for 121 tauira. The drop in numbers partly reflects the closing of a participating kura teina at the end of 2004 following a region-wide school review. Most of the remaining differences in tauira numbers from consents obtained are explained through tauira movement to other schools or tauira absence²².

Tauira Participants

Table 4 below gives the numbers of tauira at each year level and the times at which they were assessed. The highlighted numbers represent the 121 tauira whose sets of assessment data reported on below. The decrease in numbers of kaiako from year 3 to year 8 reflects the nature of KKM enrolments and the decisions that parents make re transitioning their children to English medium schooling at the end of year 5 and during the intermediate years.

²² 17 tauira were lost from the study as a result of the kura closing. 12 year 4 and eight year 5 tauira left during the course of the project, reflecting this as a critical year in terms of parent decision-making about their children's medium of education.

Table 4. Number of taura assessed at each year level across four data collection times

Year level at start of project	Data collection time			
	Time 1 2004	Time 2 2004	Time 3 2005	Time 4 2005
Year 3	-	-	30	26
Year 4	38	27	27	24
Year 5	40	27	26	22
Year 6	24	19	19	17
Year 7	24	18	15	15
Year 8	21	17	-	-
Totals	150	108	119	104

The assessments

There are many readily available literacy related tests and assessments that English medium schools in Aotearoa New Zealand use. What this means is that it relatively straightforward to identify which assessments schools are using and/or arrange for schools to use recognised, standardised measures that can be reliably compared across schools (Lai, et al, 2003). This is not the case in Māori-medium schools and that there is only a small number of assessments available for use in Māori medium contexts was reflected across the kaiako interview discussions discussed above. What generally happens is that a kura develops assessment procedures to collect information about taura progress, which may or may not compare reliably across different kura (Rau, 2003).

Similarly, the current level of readily available teaching resources in Māori means that teaching in Māori-medium demands a high level of kaiako preparation time. In cognisance of such factors as above, and given the developmental nature of the study, the university researchers rather than kaiako collected assessment data with each participating taura.

The assessment measures (Appendix 3) used were developed in cognisance of few available

Māori language and reading assessments²³ along with research literature pertaining to reading assessment and bilingual students. Non-fiction texts were selected and separate components of the assessment that were developed are described below. Scoring and weighting criteria for each of the separate components were developed along with assessment scripts and kaiako classroom observation and discussion guidelines (Appendix 4). We were guided by iwi elders, literally our aunts and uncles. All are native speakers of Māori and some were experienced Māori language teachers. Checks of Māori language question format and general Māori language content of the assessment were also undertaken with other Māori speaking university members of our research collective. Researchers undertook training sessions and trials in using and scoring the assessment measures.

Language Use and Comprehension components

Five separate components emerged for assessment:

Tāruarua (Retell – language use measure)

Maharatanga (Recall – information directly from text)

Whakataunga (Inferencing - response that might be implied or inferred from, but is *not directly stated* in the text)

Te Whakamārama Kupu (Vocabulary Meaning - contextualised meanings of selected vocabulary items in the text)

Te Whakauru Kupu Ngaro (Cloze – filling in missing words from a Cloze paragraph paraphrased from the text).

Texts

Texts²⁴ for the measures were selected from the range of commercially produced Maori language readers available to all schools including KKM and graded by two researchers in accordance with the Ngā Kete Kōrero Framework (Ministry of Māori Development, 1996).

²³ Particularly *Aka* (the School Entry Assessment with a range of tasks developed in te reo Māori), *Ngā Pūkete Pānui Haere* (running records in te reo Māori) and *Iti Rearea* (3 minute reading assessment) and *AsTTLE*.

²⁴ The final selection of texts contained an average count of 278 words. The word count was important so that a reading could be achieved within 3 minutes. Timed trials were conducted with taura and adults who were not a part of the study. All texts contained some graphic/pictorial/illustrated representations. Topics were divided equally between those that might be found in Social Studies / Social Science, and science and technology themes. Of the final selection, ten texts were Māori translations of the original English text and two texts were originally written in Māori.

This framework has been developed to grade Maori language reading material into levels of increasing difficulty. Twelve texts were selected from five of the total range of the seven different Maori language series, resulting in two texts (text a and text b) selected that were at a difficulty level considered appropriate for independent reading at each year level from year 4 to year 8. All selected texts are freely available as standard issue to schools and all were non-fiction (expository or informational). Expository or informational texts are relatively little used by primary schools despite the daily demands for the reading of informational texts in our lives (Duke, 2000 cited in Block & Pressley, 2002: 259), for example, newspapers, magazines, entertainment guides and increasingly non-linear texts such as computer-generated hypertexts. Reading instruction has arguably been largely associated with the reading of fiction, to the possible disadvantage of students faced with the prospect of difficult content areas in their latter years at school.

Administration and scoring of the assessment

Assessments were carried out one-to-one with each participating student, administered orally and took up to 20 minutes to complete. At each year level the text a was used in the assessments carried out in February/March and text b was used in the assessments carried out in October/November. All taurira responses were captured on audiotape accompanied by researchers' written notes for assessment and scoring purposes. The audio-capture ensured that the problems associated with scoring of retellings were minimised (Francis and Reyhner, 2002) and provided a record for future use in identifying developmental changes (in language-use and reading comprehension for non-fiction texts) across year-level cohorts over time. A running record was taken for each student's reading of the text used for the assessment and accuracy and self-correction rates were calculated. These rates were not incorporated into the final scoring given for the assessment measures; however they gave useful insights into the kinds of relationship that can exist between decoding and comprehending Māori text.

A criterion-referenced approach was used to score the assessments, with pre-determined criteria for each component (Appendix 5). Each component of the assessment measures attracted sub-scores, giving a total score of 55. This means that children from different year levels could gain similar scores, but on texts of different difficulty levels. The distributions of the highest possible sub-scores for each component are shown in Table 5.

Table 5. Distribution of Component Sub-scores

Component	Sub-Score
1. Tāruarua - Retell	16
2. Maharatanga - Recall	12
3. Whakataunga- Inference	12
4. Whakamārama Kupu - Word Meaning	9
5. Te Whakauru Kupu Ngaro –Cloze	6

Scoring students' retelling of the text and responses to questions about the text took into account that although they were being instructed through the medium of Maori, they were bilingually developing children. What this means is taura were given points for their responses according to criteria that included possible Maori, bilingual and English responses. For example, responses to *Whakataunga* (Inferencing) questions were scored using the following criteria:

0 = No response or irrelevant inference;

1 = Relevant English inference;

2 = Relevant Māori (or bi-lingual) inference; and,

3 = Contextualised Māori inference.

At the end of the assessment the taura were asked questions about their reading experiences and their literacy-language preferences.

Kua pānuitia pukapuka e koe i tērā wiki?

He aha ngā pukapuka i pānuitia i te Kura?

He aha ngā pukapuka i pānuitia i te Whare Pukapuka?

He aha ngā pukapuka i pānuitia i te kāinga?

He māmā, he uaua rānei te rapu mōhitanga mai i te kōrero pono?

Ki a koe, he māmā ake te whakautu pātai i roto i te reo Māori, te reo Pākehā rānei?²⁵

²⁵ As yet an in-depth analysis of the responses has not been completed and will not be reported on here. An initial analysis does indicate that a small proportion of taura read at home or used libraries: only two of the kura were located in communities with local libraries. Younger taura (years 3 to 5) were more likely to express a preference for reading and using te reo Māori, often because they did not read English yet/well. Older taura were generally committed to using te reo Māori but many described finding it 'easier' to answer questions in English because they did not always have or weren't easily able to draw out appropriate Māori vocabulary.

Reliability

Researchers undertook training sessions and trials in using and scoring the assessment measures. Training sessions of 60 to 90 minutes in scoring tauira assessments occurred on three separate occasions across the two years. A selection of tauira comprehension score sheets and assessment transcripts (minimum of three) were used. Following training, agreement of no less than 75% was reached between three researchers. Inter-rater agreement was computed by checking whether all three researchers agreed on a rating. A different rating by any of the three was counted as a disagreement for the scoring of an assessment item. Under these criteria 75% was considered high inter-rater agreement.

Results

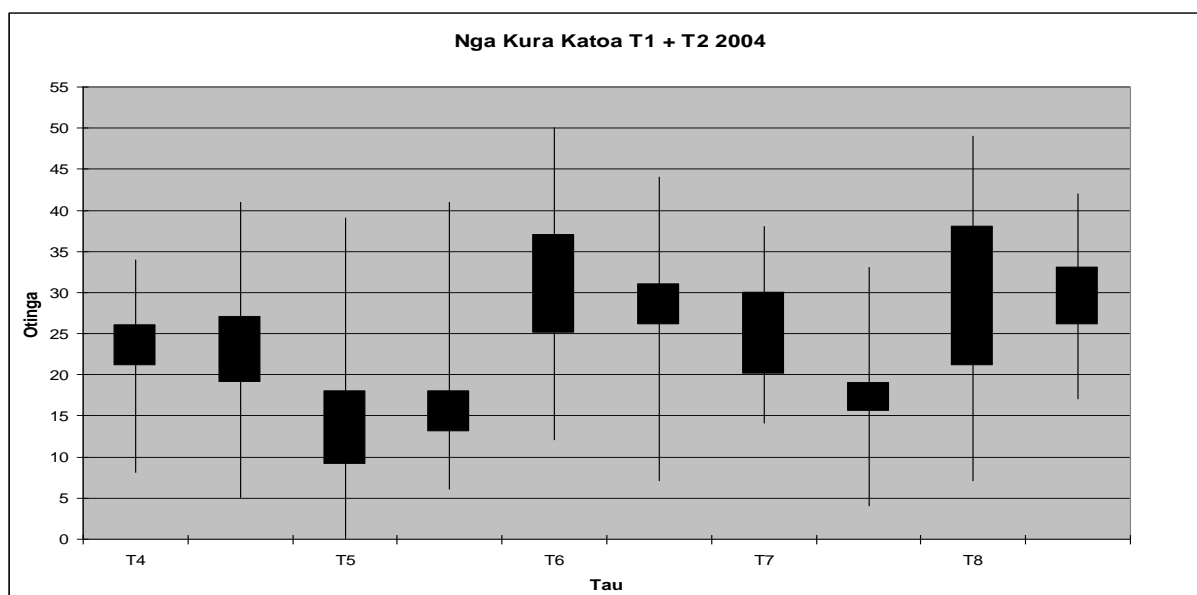
Tauira data 2004 - general patterns at each year level

Apart from a few year 4 tauira²⁶, all those assessed were able to read the texts used for assessment with between 84% and 100% accuracy, the majority read with 90 to 95% accuracy. The total scores that tauira reached on the language use and reading comprehension measures indicate that there is a lot of variability in how tauira were able to complete the different components at each year level. This variability in the face of reasonable to high accuracy presents challenges that include how to decrease tauira dependence on the phonetic regularity of written Māori and increase their focus on gaining and engaging with text meaning.

Looking across the two data collection points for 2004 shown in Figure 9 below, upward trends across the range of scores can be seen for years 4 and 5. Year 8 scores reflected a decrease in variability across high, medium and low scores. While there was a movement upwards at the lower end of scores, there was a corresponding move downwards of the high scores. In the case of year 5 there was an increase in variability of higher and a decrease in middle and lower. For years 4 and 7 there was increase in variability in both directions and year 7 showed a fall in the highest score, that is there was an increase in variability amongst the higher and lower achievers on the assessment. Both years showed a decrease in variability for the middle 50% of tauira scores. This concertina effect was seen across all year groups except for year 4.

²⁶ These children included ones identified as having special learning needs by the kura and/or were receiving additional or specialised learning assistance.

Figure 9: Range in total scores at each year level – Time 1 and 2, 2004



Tauira experienced varying success across the different components of the language use and reading comprehension measures, shown in Figures 10 through 14. The figures show the percentage of tauira in each year that gained a low, medium or high score for each component across the two different data collection times. This was done by separating the possible obtainable scores for each component into three subsets of scores, shown in table 5 below. For example, the highest score obtainable for Maharatanga (recall) was 12. A high score was 9 to 12, medium score was 4 to 8 and low score was 0 to 3.

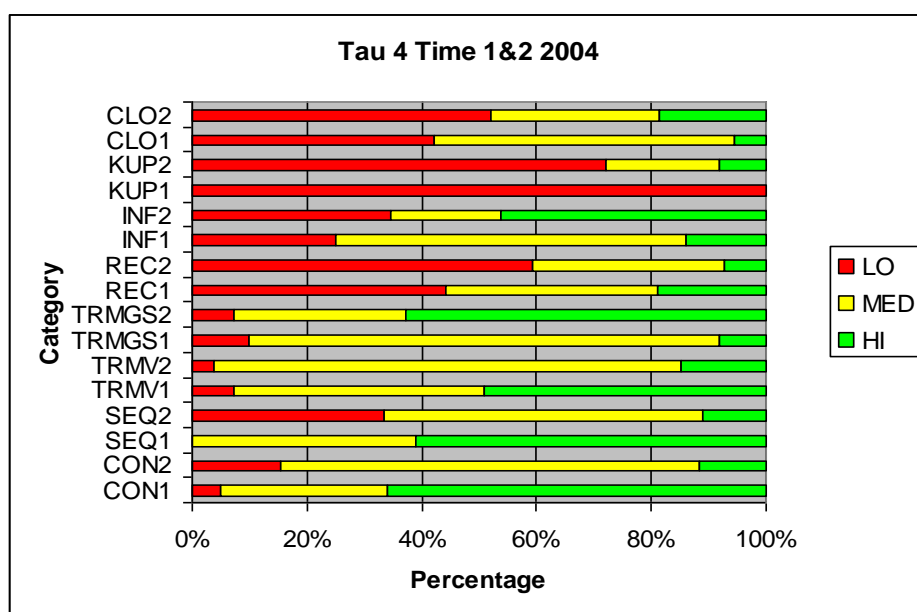
Table 6. Low, medium and high score ranges for each assessment component

ASSESSMENT COMPONENT	COMPONENT SCORE RANGE		
	<i>LO</i>	<i>MED</i>	<i>HI</i>
<i>CONTENT</i>	0 - 1	2	3 - 4
<i>SEQUENCE</i>	0 - 1	2	3 - 4
<i>TE REO MĀORI vocabulary</i>	0 - 1	2	3 - 4
<i>TE REO MĀORI grammar and structure</i>	0 - 1	2	3 - 4
<i>RECALL</i>	0 - 4	5 - 7	8 - 12
<i>INFERENCE</i>	0 - 4	5 - 7	8 - 12
<i>WORD MEANING</i>	0 - 3	4 - 7	8 - 9
<i>CLOZE</i>	0 - 2	3 - 4	5 - 6

One of the consistent patterns across all years was that Whakamāramatanga Kupu (vocabulary meaning in context - giving contextualised meanings of selected vocabulary items in the text) was the most, or a very close second most, likely component for which tauira achieved a low score. For all but year 4, the proportion of low scores for these two components increased or remained the same from time 1 to time 2. Except for year 8, Whakuru Kupu Ngaro (Cloze) was the second or third most likely component for tauira to gain a low score.

While a well-developing vocabulary will not necessarily ensure good reading comprehension, good reading comprehension requires a well developing vocabulary (Morrow, Gambrell & Pressley 2003). In effective classrooms learners will encounter new and unfamiliar words in context and receive explicit instruction on how to predict or create possible appropriate definitions. Teaching children and helping children to develop effective strategies for working out what unfamiliar vocabulary might mean in the context of written text is critical for reading comprehension development.

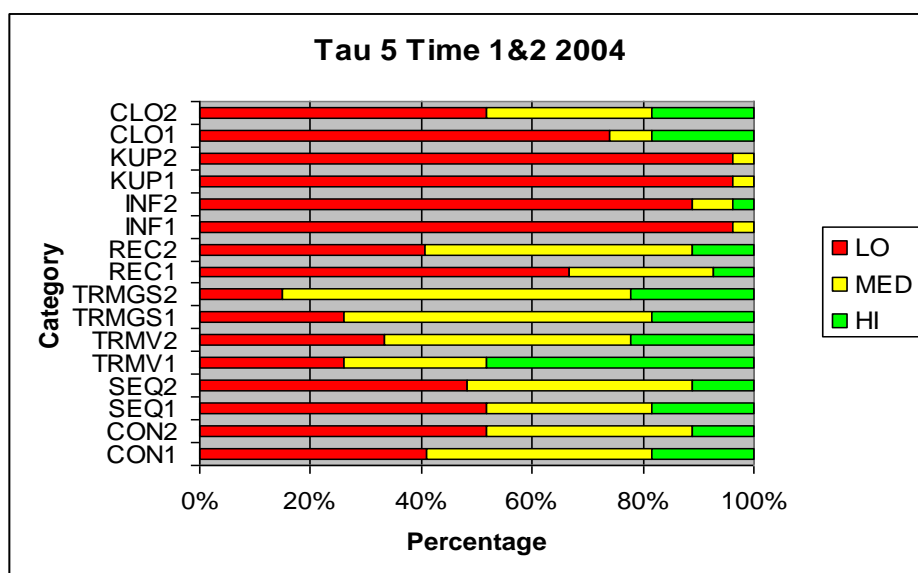
Figure 10: Year 4 tauira scores 2004 by language use and reading comprehension component categories



For year 4 students, Figure 10 above shows the overall increase in scores from time 1 to time 2 reflects positive changes in the retelling component where the percentage of low scores dropped slightly for Māori language vocabulary (TRMV), and where the percentage of high scores rose

by over 50% for grammar and structure (TRMGS) scores. The percentage of low scores for the vocabulary meaning in context component (KUP) also fell by over 20%. Interestingly the percentage of low scores for sequence (SEQ) and content of retelling (CON) increased. One possible reason for this was that the first assessment used a reading text that contained a stronger picture-text relationship, compared with that used in the second assessment. This may also help explain the slight decrease in medium and high scores for recall (REC) and for inferencing (INF) components of the assessment.

Figure 11: Year 5 tauira scores 2004 by language use and reading comprehension component categories

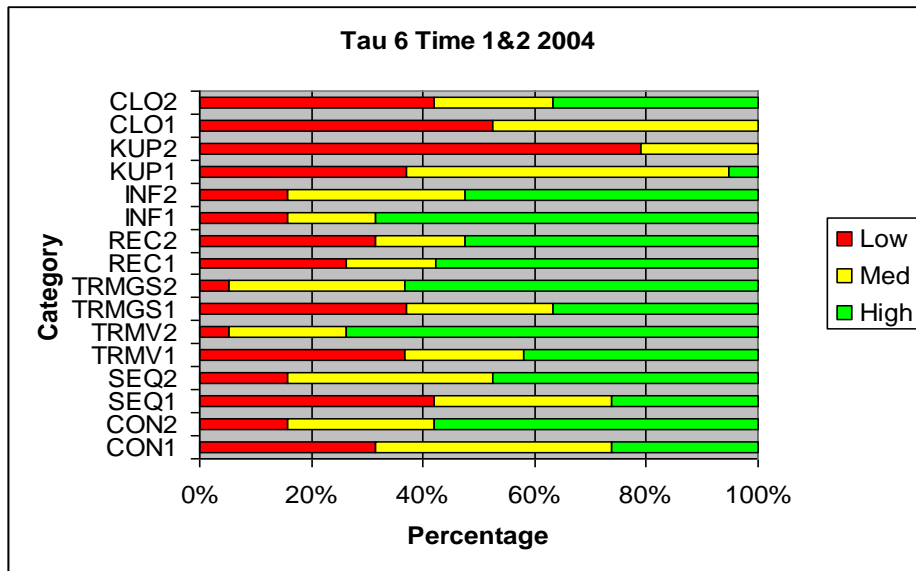


In figure 11 above the overall increase in year 5 scores reflect increases in medium and/or high scores for sequence, for Māori language grammar and structure, and for inferencing. Higher percentages of medium-high scores are shown for recall and cloze (CLO) components at time 2 as well.

Comparisons between time 1 and time 2 total scores for year 6 reflected a downward trend overall. However it is important to note that this trend was not evident across all kura. Year 6 scores for one kura showed a strong increase in overall scores, a shortening of both tails, and an overall move from mainly the lower tail at time 1, to making up the top of the box and some of the upper tail in time 2. Another Kura showed a shift upward for the middle 50% of their students, however with an accompanying increase in range of scores in the lower 25%. Only

one Kura showed a decrease in all year 6 scores. Figure 12 below shows that increases of percentages of medium to high scores from time 1 to time 2 occurred for content, sequence, te reo Māori vocabulary, te reo Māori grammar and structure, and cloze. The percentage of low scores increased for the vocabulary meaning in context and the recall component.

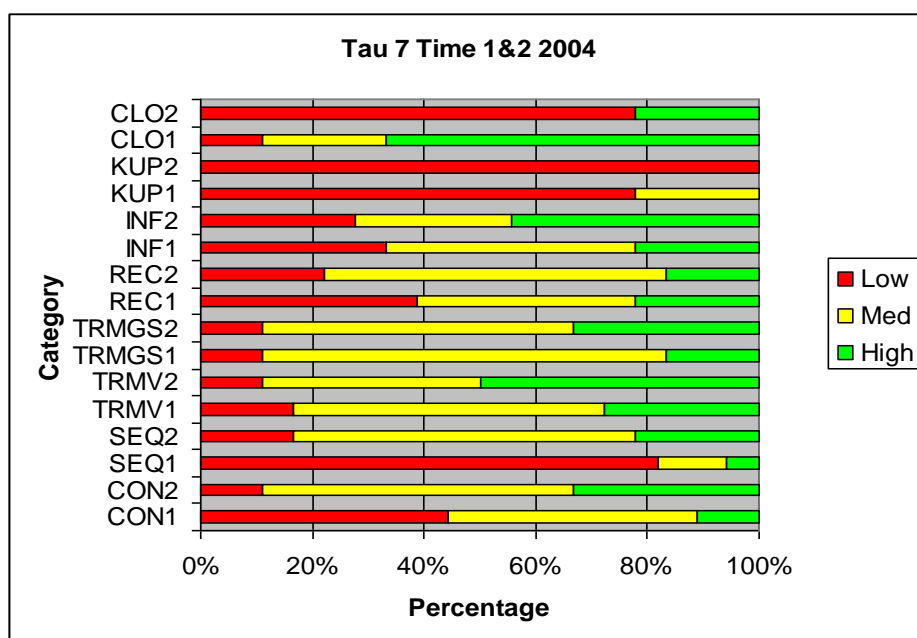
Figure 12: Year 6 taurira scores 2004 by language use and reading comprehension component categories



Year 7 total scores also showed a downward trend from Time 1 to Time 2. While increases are shown in figure 13 below in the percentage of scores at medium/high are reflected for content and sequencing for retelling, for recall and to a lesser degree te reo Māori vocabulary and inferencing, a noticeable decrease can be seen for vocabulary meaning in context and for cloze components.

Year 7 total scores also showed a downward trend from time 1 to time 2. While increases in the proportion of scores at medium-high are reflected for content and sequencing for retelling, for recall and to a lesser degree Māori language vocabulary and inferencing, a noticeable decrease can be seen for the vocabulary meaning in context and cloze components.

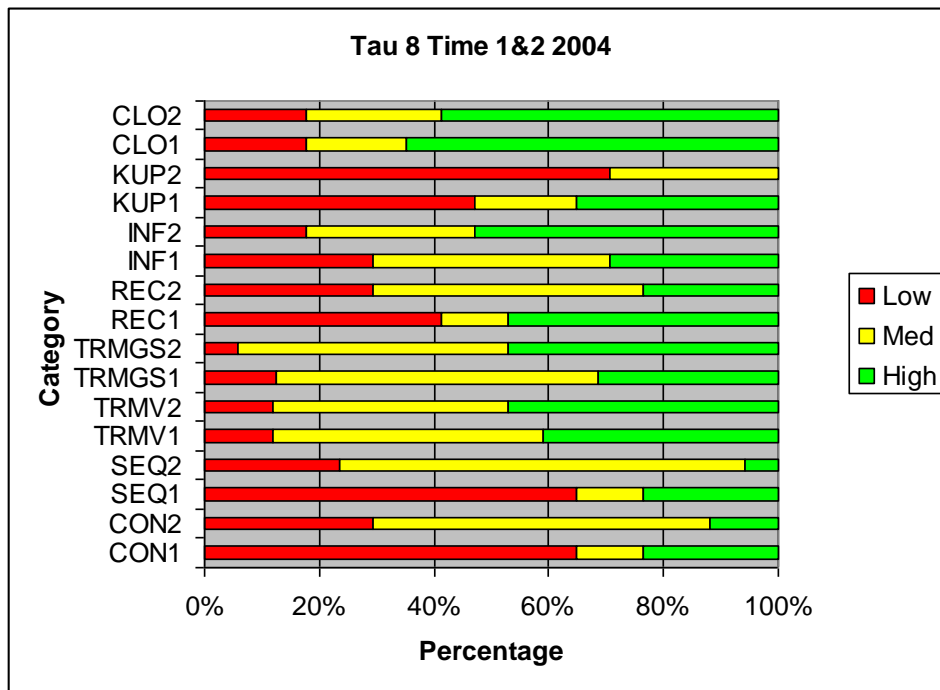
Figure 13: Year 7 tauira scores 2004 by language use and reading comprehension component categories



Kaiako described years 6 and 7 classes as challenging and exciting ones to teach when considering the patterns shown for year 6 and 7 scores during discussions of time 1 and time 2 data with each kura. Possible factors influencing the downward trends shown in total scores across phases were identified and discussed, including students’ stage of development, kaiako Māori language development and availability of appropriate Māori language teaching resources for these classes. In some of the discussions tauira were described as beginning to enter puberty, which kaiako saw as influencing, for example, how tauira approached kura and schoolwork and their willingness to answer questions when they weren’t confident they knew the ‘correct answers’. Kaiako described how their own levels of Māori language development were sometimes stretched to their limits when working with the teaching resources used with higher classes.

Researchers also commented on how they had found some of the tauira in these years, who at time 1 had been prepared to suggest answers for questions, appeared reluctant to propose possible answers at time 2.

Figure 14: Year 8 taura scores 2004 by language use and reading comprehension component categories



For year 8 total scores, there was a noticeable shift upwards in the lower 50% of scores, matched however by a corresponding shrinking downwards in the upper half of scores. Figure 14 above shows an increase in the percentage of medium/high scores from time 1 to time 2 across all components of the assessment except for te reo Māori vocabulary and cloze, which remained the same and for Kupu (word meaning in context), which showed a decrease.

Summary

The wide variation in the component and total scores of taura who have mastered the mechanics of decoding written Māori language at appropriate difficulty levels has clear implications for instruction. What the wide variation indicates is the need for effective instructional strategies that do at least two things. One is to respond to the range of Māori language and reading comprehension skills and knowledge at each year level in ways that address the long lower tails. Two is to help taura in the middle achievement range to learn and achieve in ways that more closely resemble higher scorers. In addition, the drop in high scores for the three older year groups, years 6, 7 and 8 indicates the need for instructional strategies that are effective for ensuring that successful learners receive instruction that continues to move their development and learning in an upward direction.

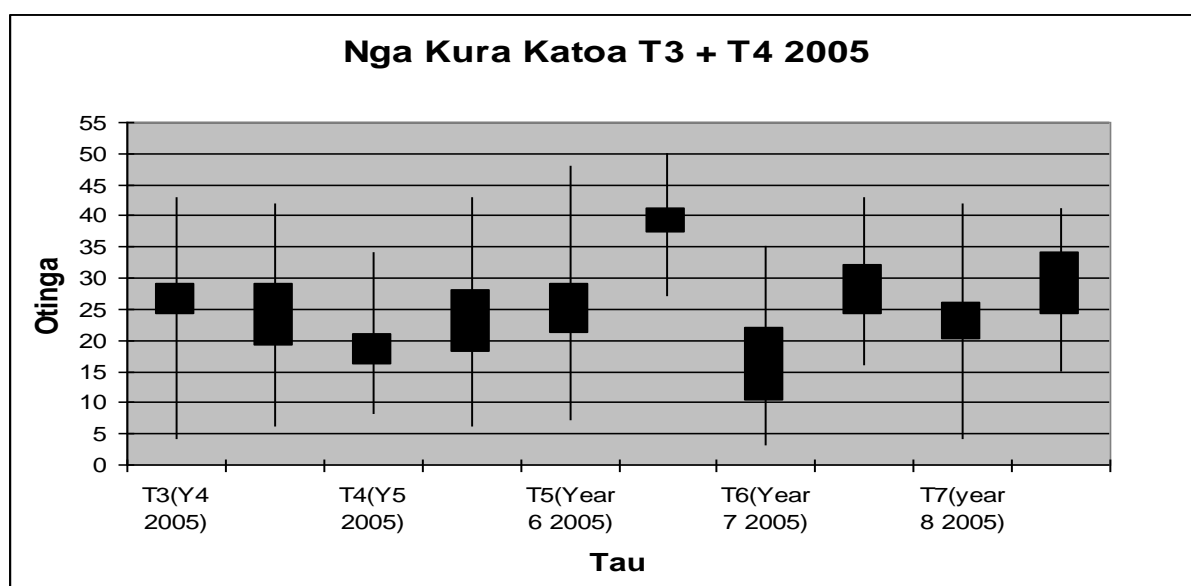
Tauira data 2005 - general patterns at each year level

Student assessment data collected across 2004 had shown wide variation across tauira scores, which increased for years 4 and 7 and decreased with respect to years 5, 6 and 8. In addition, an increase in the top scores occurred for years 4 and 5 and a decrease for years 6, 7 and 8.

Figure 15 below shows the range in assessment scores for each year group at time 3 and time 4 data collections. Each year group is identified by the year that they were in at the start of the project as well as the year level they were in during 2005 (corresponding to the assessments that they were tested with). As was the case in 2004, there was wide variability across assessment data collected at the start of 2005, reflected in the length of upper and lower tails in the first set of data for each year in the figure below.

There was an increase in the top score for years 4 (i.e. T4: tauira in year 5 during 2005), 5 and 6 and an increase in the bottom score for years 3 (tauira in year 4 during 2005), 5, 6 and 7. There was a decrease in variability across 2005 scores for all year groups except year 4. The decrease involved a decrease in the range across the lower scores and upper scores for years 3, 5 and 7, and upper scores for year 6.

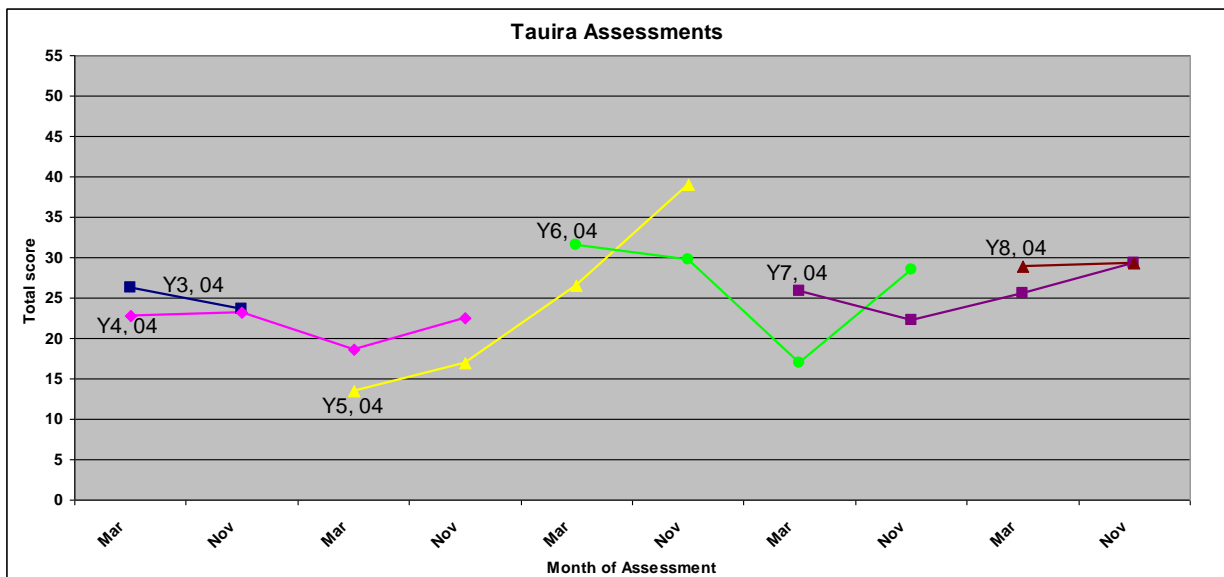
Figure 15: Range in total scores at each year level – Time 3 and 4, 2005



The decrease in variability and increase in top and bottom scores that occurred for most of the year groups in 2005 indicates that instruction was beginning to make, albeit small, changes to the long tails, moving lower achievers upwards, whilst beginning to ensure that more successful achievers continue learning at the higher year levels.

Figure 16 below shows the mean scores for each year group for the four assessment data collection times. For example, for the line labelled Y4,04 the first data point corresponds to the mean score for time 1 2004 when the Y4 tauira were beginning year 4, the fourth data point corresponds to the mean score for time 4 2005 when the Y4 tauira were completing year 5. The same pattern holds for lines labelled, Y5,04; Y6,04; and Y7, 04. For the line labelled Y3, 04, the first data point corresponds to the mean score for time 3 when Y3 tauira were beginning year 4 and the second data point corresponds to the mean score for time 4 when Y3 tauira were completing year 4. For the line labelled Y8, 04 the two data points correspond to the mean scores for Y8 at time 1 and 2, 2004.

Figure 16: Mean tauira total scores for all assessment data collection times, 2004-2005



The figure above shows that in 2005 cohorts in year 5, 6 and 7 classrooms achieved mean scores that were at least 5 to 10 points higher at the end of the school year, compared with the cohorts of the previous year. In 2005 the Y3 cohort achieved a higher mean score at the start of year 4 than the same-year level cohort in 2004, but there is little difference in the end of year

mean scores. Similarly the mean score for Y7 at the end of their time in year 8 classrooms in 2005 was similar to the mean score of the Y8 cohort at the end of 2004.

The downward trends reflected in Y6 and Y7 mean scores in 2004 were reversed in 2005. The flat-line trend in Y4 and Y8 scores reflected in 2004 means changed to a downward trend for Y3 and an upward trend for Y8.

The change in variability, high and low scores and means indicate that changes observed in kaiako classroom practices did correlate with changes in taura outcomes as measured by the assessment developed for the project. A closer examination of changes in scores across the different assessment components was carried out. The percentage of taura in each year that gained a low, medium or high score for each component across the time 3 and time 4 data collections is shown in figures 17 to 21 below.

Figure 17: Year 3 taura scores 2005 by language use and reading comprehension component categories

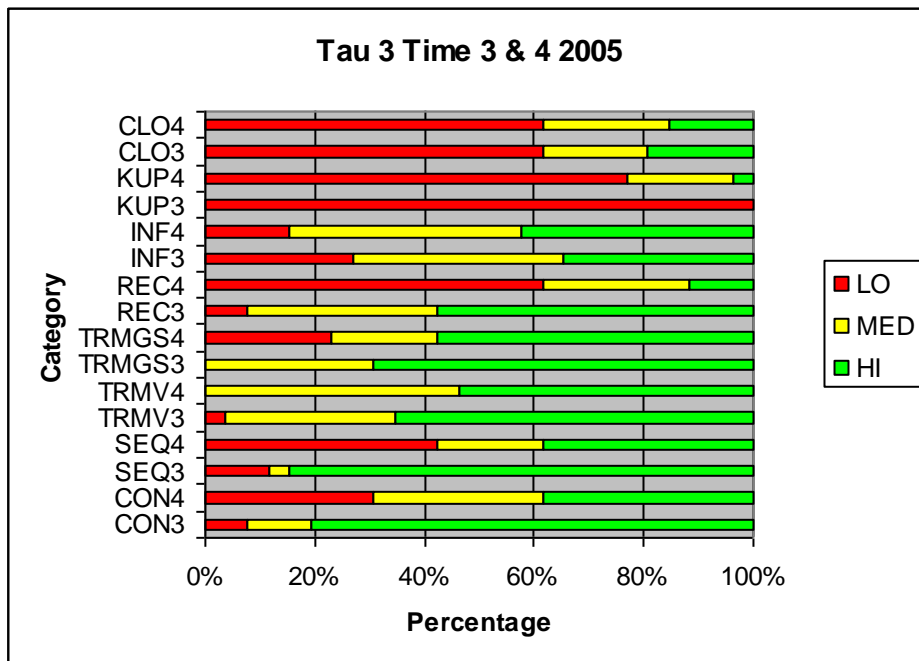
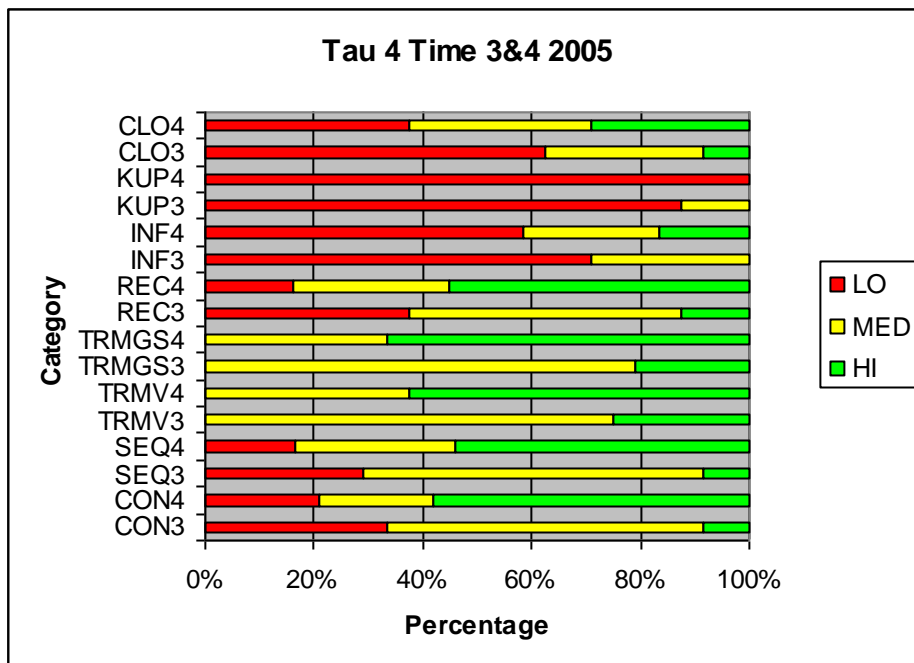


Figure 17 shows how year 3 scores were rated for assessments carried out near the beginning and end of their time in year 4 classrooms. The figure shows that the percentage of medium/high scores increased for te reo Māori vocabulary (TRMV), inferencing (INF),

vocabulary meaning in context (KUP) and remained the same for cloze (CLO). The percentage dropped for content (CON), sequencing (SEQ), te reo Māori grammar and structure (TRMGS) and recall (REC), which may help explain why there was little movement in the mean or spread of scores reflected in figures 15 and 16 for this group. The pattern of changes described above was similar to the pattern of changes for the 2004 cohort of year 4 taura.

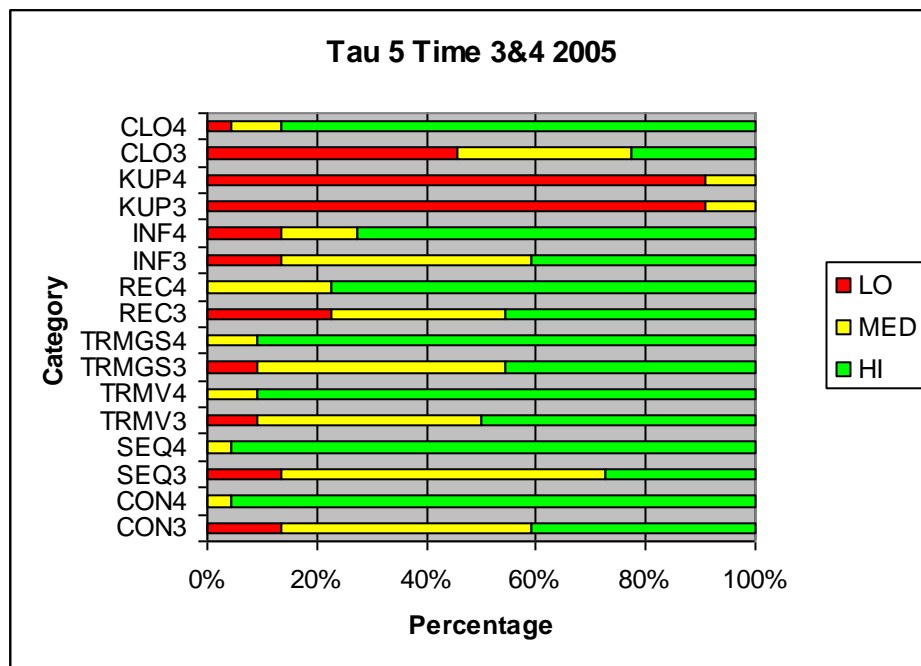
Figure 18 shows that there was an increase in the percentage of medium/high or high scores for all assessment components except for vocabulary meaning in context. Comparing the pattern of scores with that of the cohort to 2004 year 5 taura, the percentage of scores that were rated as low decreased markedly for all components except for vocabulary in context and inferencing.

Figure 18: Year 4 taura scores 2005 by language use and reading comprehension component categories



The scores of year 5 cohort of taura from time 3 to 4 showed higher percentages of high scores for all components but vocabulary meanings in context, where the percentage of low and medium scores remained the same, shown in figure 19 below. The percentage of scores in the low range were less for this group than the 2004 year 5 cohort for all but vocabulary meaning in context.

Figure 19: Year 5 taurira scores 2005 by language use and reading comprehension component categories



Year 6 scores showed that the percentage of high scores increased across all components of the assessment from time 3 to time 4, in figure 20 below. The results contrasted with the 2004 year 7 cohort in that the percentage of high scores had dropped for cloze and vocabulary meaning in context across the previous cohort's assessments. Year 6 also showed greater percentages of medium/high scores for content, te reo Māori vocabulary and inferencing at the end of 2005, compared with the previous year 7 cohort. The patterns of high/medium/low scores at the end of the year were relatively similar for sequencing, te reo Māori vocabulary and structure and recall for both groups.

Figure 20: Year 6 tauira scores 2005 by language use and reading comprehension component categories

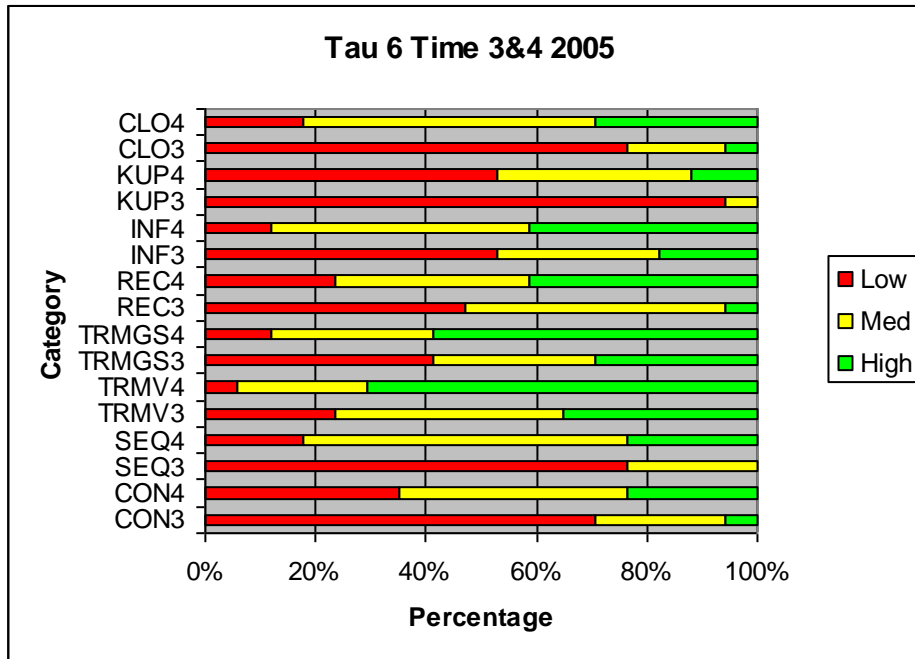
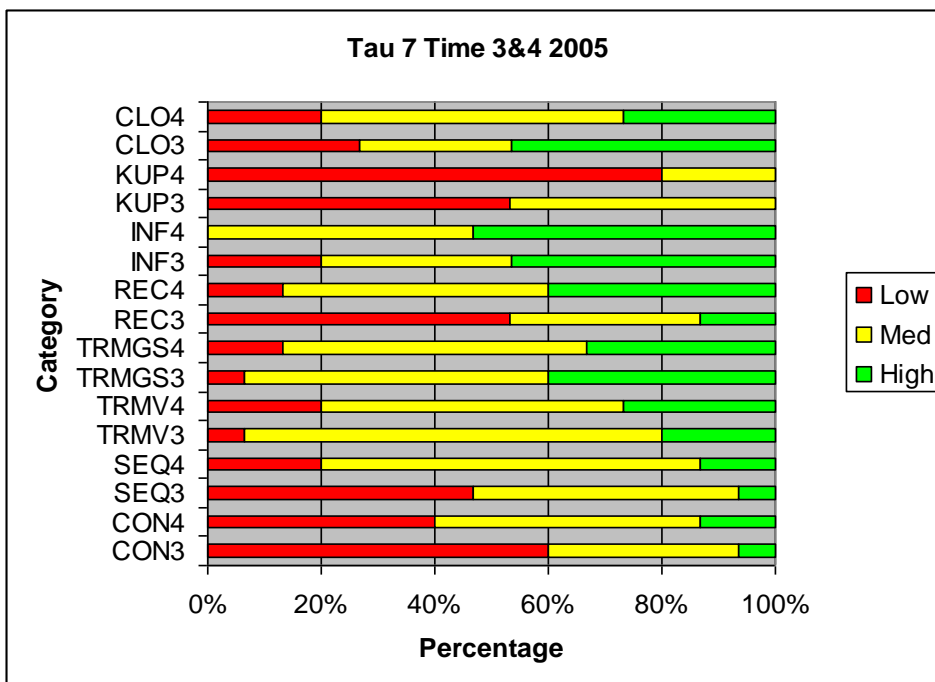


Figure 21: Year 7 tauira scores 2005 by language use and reading comprehension component categories



Assessment data obtained by year 7 taura near the beginning and end of their time in year 8 classrooms showed an increase in percentages for medium/high scores for cloze, inferencing, recall, sequencing and content. There were decreases for te reo Māori grammar and structure and vocabulary, and vocabulary meanings in context, shown in figure 21 above. The pattern of high, medium and low scores were similar across the two cohorts, reflected also in the similarity in means and the slight drop in the highest score, although this was accompanied by a shortened tail across the lower quarter of scores.

Summary

The first year of the project involved collecting baseline data to develop literacy learning and teaching profiles, which were discussed with Kura members at the middle and end of the school year. Baseline data in the first year of the project found high variability across assessment scores for all cohorts of taura. The drop in high scores for the three older year groups, years 6, 7 and 8 was of particular concern. We continued to collect data on teaching and learning in the second year of the project. In addition to collecting data, opportunities for collaborative learning for kaiako to develop instructional strategies aimed at supporting and improving their students' reading comprehension and Māori language development were provided.

There was wide variability across assessment data collected at the start of 2005, by the end of the second year the assessment scores showed a decrease in variability for all cohorts except year 4 (in year 5 during 2005). The decrease involved a decrease in the range across the lower scores and upper scores for years 3, 5 and 7, and upper scores for year 6. The top score increased for years 4, 5 and 6 and there was an increase in the bottom score for years 3, 5, 6 and 7. The downward trend in scores was reversed for years 6 and 7 was reversed and flat-lined for year 8.

5. He Matapaki - Discussion

The research project reported here was exploratory and descriptive in nature with an intervention component. The research drew on cross-sectional and longitudinal design using quantitative and qualitative data collection methods. The project was interested in two things: reading comprehension and language use of taura in KKM, and KKM kaiako approaches to teaching reading comprehension (and language) using non-fiction texts²⁷. The study focused on year 4 through to year 8 classrooms and kaiako across five different kura. Data on kaiako classroom teaching and taura reading comprehension and Māori language use was collected across two years.

The aims of the project were to:

- Contribute to research-based knowledge of current practices in literacy in KKM
- Provide analysis of patterns and relationships between reading comprehension and language development to help inform the development of effective literacy programmes in KKM.
- Contribute to research based knowledge of effective teaching strategies for reading comprehension and language development in KKM in Y4 to Y8.
- Develop and pilot a professional development approach to inform and upskill kaiako.

In the first year of the project taura scores from the project-developed assessment measures, alongside their reading accuracy rates, pointed to a weak relationship between decoding, Māori language use and reading comprehension. Nearly all the taura involved in this study showed that they had developed decoding skills necessary and sufficient to accurately read texts identified as suitable for their year level. While there was little variation between taura across reading accuracy levels on texts used for assessment, there was a lot more variation on the scores they achieved on te reo Māori, retelling, comprehension and vocabulary components of the assessment. Components of the assessment that focused on vocabulary knowledge proved challenging for taura across all levels, in particular providing contextualized meanings for vocabulary items in a text that they were able to decode effectively. Classroom observation data that was collected in the first year of the project indicated that interaction patterns and

²⁷ Kaiako involved in the study reported that using non-fiction texts for literacy instruction was not a usual practice.

strategies used were surprisingly similar across all but a few of the kaiako. We found that kaiako tended to focus on surface text and surface meanings, compared with using strategies linked to higher-level reading comprehension skills such as analysing, synthesising and evaluating. Kaiako questioning and feedback tended to relate to surface aspects of the text rather than demanding higher level thinking about meaning from taura.

The degree of similarity of instructional patterns across kaiako teaching in classrooms from year 4 to 8 raised questions around the extent kaiako rely on practices that are relevant to students learning to read, rather than reading to learn. Questions around whether instructional strategies need to shift the emphasis from showing students how to read, which is important in the first years of schooling and literacy instruction, to showing students how to get meaning and make meaning from text as taura move into year 4 and beyond.

Previous studies have shown the potential for change that can come about when researchers discuss data with research participants (e.g. Hohepa, 1999; Lai, et al, 2003). The research project involved working with members of each Kura in the discussion and analysis of learning and teaching data. Many of the Kura discussions not only involved staff, but also Kura governors, parents and grandparents, other school community members and taura themselves. As such, the project involved taking a particular whole school approach – whanau-a-kura ('school family'), which is integral to Kaupapa Māori²⁸, to improving literacy instruction, on a Kura by Kura basis, through information sharing and collaboration (Morrow, Gambrell & Pressley, 2003). The approach that was used is seen as having potential to provide rich opportunities for contextualised professional learning that extends through to families and community.

The data described and discussed in this report were presented and discussed with each Kura participating in the research project. Following the scoring and analysis of data collected at time 1, the researchers made a mid-phase return visit to each Kura to present this data. Each

²⁸ A view in which Maori cultural philosophies, beliefs and practices are the norm, see L.T. Smith Smith, L. T. (1998) *Decolonising methodologies: Research and Indigenous Peoples*. London: Zed Books Ltd.

Kura was visited again at the end of the phase 1 to present both sets of the baseline data collected at time 1 and time 2. Each Kura was supplied with year group by year group results for all taura across the five Kura participating in the study, and a breakdown of how each year group performed across the different components, which are described in the Results section above. They were also presented the year by year results for their own respective taura. This gave Kura an indication where their taura scores fell in relation to the total group at each year level. Each Kura was also presented the observation data collected for kaiako from their respective Kura participating in the study, along with combined observation data for all teachers. The report back and discussions provided kaiako a supportive context to critically reflect on what their own and other colleagues' data was saying about teaching and learning in their classrooms and their kura.

Kaiako reported using video recordings of their classroom teaching taken during the first year of the project as an opportunity to reflect on their practice, and in a few instances to discuss their practice with colleagues and members of the wider school community. While the potential ramifications of this may not sit well in a 'purist' view of research that incorporates baseline and intervention phases, they sit well in a Kaupapa Māori view encapsulated in the proverb 'naku te rourou, nau te rourou, ka ora te iwi' – with your food basket and my food basket our people will live. As researchers and kaiako we work collectively to ensure the educational wellbeing of our children and ourselves.

The wide variability across the assessment scores that was found at all year levels was seen to have clear implications for instruction. What it was seen to indicate was the need for effective instructional strategies that can do a number of things. One was to decrease taura (and to a certain extent kaiako) dependence on the phonetic regularity of written Māori and increase the focus on gaining and critically engaging with text meaning. Another was to respond to the range of te reo Māori and reading comprehension skills and knowledge at each year level, in ways that addressed the wide spread in achievement at the lower end. Another was to help move taura learning and outcomes in the middle range to more closely resemble that of the more successful learners.

Downward trends shown for years 6 and 7 and the downward trend shown for the upper 50% of scores for year 8 at the end of the first year presented another clear challenge. This was to

develop and implement instructional strategies that could meet the needs of those who appear to be learning and achieving well, in ways that sustain as well as significantly build on their current levels of learning.

A workshop was held in all kura before the 2005 teaching year began. Data collected at the beginning and end of 2005 reflected that in general there were changes in kaiako teaching practices towards higher levels of instructional language focused on deeper text vocabulary meanings. This was indicated in particular by the analysis of kaiako utterances that involved questioning, feedback or a focus on vocabulary. Such changes were also accompanied by some positive changes in taura achievement, indicated by changed patterns in outcomes as measured by an assessment developed for the project. These changes across taura assessment data collected in 2005 included: a reverse in trends from negative to positive increases in scores at year 6 and year 7 and decreasing variability in scores at nearly all year groups accompanied by an increase in higher and lower scores.

One of the challenges that faced this project was high teacher mobility, for example there were kaiako changes in four of 10 classrooms noticed in the first year of the project and five in 13 classrooms in the second year. However what we did find was that in kura where a whole-kura or kura whānau approach was taken to such matters as curriculum development teacher or professional learning and development, the impact of such changes could be minimised, reflected in the positive changes shown in classroom observation data for some kaiako who came into the project at the end of 2004 or beginning of 2005.

Taken overall the changes in kaiako instructional practices, in particular in teaching and learning interactions, were accompanied with indications of positive changes in reading comprehension development of year 4 to year 8 taura. The results are seen as evidence that kaiako, on a kura by kura basis, reviewing and discussing information about their own teaching practices alongside assessment data provides effective opportunities for professional learning and kura whānau development.

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Appendix 1 - Profiles of kaiako interviewed

	Year level of class at time of interview	Main Medium of Teacher Education	Male or Female	Years in teaching	Years in KKM	Years teaching this KKM year level	Māori 1st or 2nd language
1	Y3-4	English	F	15	3	3	2 nd
2	Y3-4	Maori	M	1	1	1	1st
3	Y3-4	English	F	25	5	3	2 nd
4	Y3-4	Maori	F	2	0 (1 st year)	0	2 nd
5	Y3-4	Bilingual	F	1	1	0	2nd
6	Y4-5	English	F	3	3	1	2 nd
7	Y5-6	Bilingual	F	5	5	0	2 nd
8	Y5-6	English	F	12	4	3	2 nd
9	Y5-8	English	F	11	7	Unknown	2 nd
10	Y5-8	Maori	M	17	17	3	1 st
11	Y6	Unknown	M	Up to 10	4	4	1 st
12	Y6-7	English	F	8	2	2(Y7) 0(Y6)	2 nd
13	Y6-8	Bilingual	F	4	0 (1 st year)	0	2 nd
14	Y7-8	English	F	0(1 st year)	0	0	2 nd
15	Y7-8	English	F	15	5	1	1 st

Appendix 2: Kaiako Interview/Discussion guide sheet

<p>Whakawhanuitia te Hinengaro</p> <p>Te Raa: _____ Kaiako : _____ Kura: _____</p> <p>Timata: _____ Mutu: _____</p>	
<p>KAIAKO DISCUSSION</p> <p>Thank you for letting us video your classroom teaching and helping with extending our knowledge about our children’s literacy and language development and teaching practice. I am going to ask about some of the observations we recorded.</p> <p>I have the video recording here so we can look at it during our discussion.</p> <p>Have you brought a copy of your reading plan to our discussion and can I have a copy please.</p> <p>Can I ask for some brief information about your Years teaching:</p> <p>Years at Kura Kaupapa Māori:</p> <p>Years teaching at this year level</p> <p>Years speaking Māori (1st lang/2nd lang)</p>	<p>(Note prompts, video segments etc.)</p>
<p>Now about CHOICE OF READING</p> <p>At the start of this year we asked kaiako to choose non-fiction texts to use for the lessons we were going to observe.</p> <p><u>What guided you to choose this book/article....?</u></p> <p>How do you preview a book or story before you use it in the classroom for guided or shared reading?</p> <p>What differences have you found choosing and previewing non-fiction texts compared to fiction texts.</p> <p>(Do you have a teaching plan for the lessons I observed?)</p>	<p>Reading level?</p> <p>Interest level?</p> <p>Te reo Māori level?</p> <p>Others?</p>
<p>INTRODUCING STORY/ARTICLE</p> <p><u>I noticed that you introduced the story/article by.....</u></p> <p>Why did you choose to do this?</p> <p>Tell me about any other ways you have used to introduce story topics?</p> <p>Why have you used these ways?</p> <p>What differences have you found when you’re introducing non-fiction texts compared to fiction texts?</p>	

<p>COMPREHENSION</p> <p>I noticed that during the lesson you focused on the children's comprehension of the story/article by.....</p> <p>Why did you choose to do this?</p> <p>What other ways do you use to help children gain meaning from the text?</p> <p>How do you help the children to understand the context in a story or article?</p> <p>e.g. if we were reading a story we would know by the words used what the weather was like, what time of day it was, if it was present day, or past, fact or fiction.</p> <p>What differences have you found when you're focusing on comprehension of non-fiction texts compared to fiction texts?</p>	
<p>VOCABULARY FOCUS</p> <p>During the lesson I noticed that <u>you focused on particular words</u> by.....</p> <p>Why did you do this?</p> <p>What other ways might you focus on vocabulary?</p> <p>How do you find out what words the children don't know or don't understand?</p> <p>OR if they didn't focus on any individual words</p> <p>What ways have you used to focus on vocabulary?</p> <p>How do you find out what words the children don't know or don't understand?</p> <p>During the lesson you asked children about word meanings by...</p> <p>Why did you do this?</p> <p>What (other) ways might you ask children for clarification of word meanings?</p> <p>During the lesson children asked for clarification of words by.....</p> <p>Why did you respond the way you did?</p> <p>What differences have you found when you're focusing on vocabulary in non-fiction texts compared to fiction texts?</p>	

<p>FOLLOW UP ACTIVITIES</p> <p><u>What activities follow lessons like the ones we observed?</u></p> <p>What is the purpose of these activities?(if don't make links between lesson and activities e.g. story comprehension, story analysis, vocabulary learning and extension etc.)</p> <p>ASK What are the important links between the lesson and activities?</p> <p>What differences have you found developing and choosing activities for non-fiction texts compared to fiction texts?</p>	
<p>MONITORING AND ASSESSMENT</p> <p>How do you monitor and assess children's reading comprehension in your class?</p> <p>What kinds of things do you focus on in your assessments?</p> <p>How do you monitor and assess Māori language knowledge in your class?</p> <p>What assessments are used?</p> <p>What kinds of texts have you used to assess with, e.g. fiction texts, non-fiction texts?</p> <p>Can we look at e.gs of assessment records that you have for children?</p> <p>Talk about the different ways you use the assessment information you collect for your children?</p>	<p>e.g. running records, comprehension questions, oral / written retelling, cloze,</p> <p>e.g. decoding, comprehension, recall, inferencing</p> <p>e.g. orally, written work, while in class, while at play etc., others assess (kaumatua, kaiako , whanau)</p> <p>e.g. tests for vocabulary knowledge, tests for understanding of spoken text, tests for understanding of written text</p> <p>e.g. checking whether learning goals/outcomes achieved, grouping children, identifying areas to focus on in teaching, developing learning activities</p>
<p>Finally, Given what you know now, are there things that you would like to try, things you would like to change, or things you would like to do differently in your teaching?</p> <p>Is there anyone in the Kura or connected to the Kura that you would like to work with to explore how you might do things differently?</p> <p>How did you find the experience of being videoed? Do you think it affected your usual class teaching? How?</p> <p>THANKS AGAIN FOR YOUR HELP AND TIME. At the beginning of next year to explore how things might be done differently. Would you like copy of tapes?</p>	

Appendix 3: Example of tauira assessments

Reanga 5E: Ngā Wēta Mau Tūeke		He kōrero pono kua kitea:		WāTimata:		/55			
Nama Kura		Ae Kāhore		Wā Mutu					
Tārua (tia)/ tāruarua (repeat): Retell							/16		
1. Kōrerotia mai anō ou ake māramatanga mo tēnei kōrero pono? M E He momo ngāngara, nohonga (habitat), tūeke (computer chip) rerekē ki ia wēta, tohu oro reo irirangi, me pehea ka kitea ai									
Content /4		Sequencing /4		Te reo Maori – vocab /4		Te reo Maori – gram+struc/4			
Maharatanga: Recall		/12		Pikitia (Picture Cue)	Pānuitia anō (Re-reading)	Pānui tonu (Reading on)	Mohio (Prior knowledge)	Putanga whakaaro (Knowledge from other sources)	Etahi atu (Other)
2. He aha te take e ngaro haere ana ngā wētā? E kainga ana e te kiore, e te mauhi. He aha te take i whakaaro pēnā ai? 0 1 2 3 M E +P									
3. He aha te take e mau tūeke ana ētahi o ngā wētā? Kei hea te nohoanga pūnanga/ Ka rangona e te tūeke, ko te mōhiotanga kei hea ngā wētā e huna ana/ pehea te tawhiti o te haerenga/ kia mohiotia te nekenekehanga/tawhititanga/kainga o te weta 0 1 2 3 M E									
4. Ko wai te kairangahau o nga weta? Ko Mere McIntyre 0 1 2 3 M E									
5. Ma te pēhea ka mōhio ai te rerekētanga o te puru ki te uwaha? He aha te take i whakaaro pēnā ai? He nui ake te uwaha ki te puru. He iti iho te puru ki te uwaha. 0 1 2 3 M E +P									
Whakataunga: Inference		/12		Pikitia (Picture Cue)	Pānuitia anō (Re-reading)	Pānui tonu (Reading on)	Mohio (Prior knowledge)	Putanga whakaaro (Knowledge from other sources)	Etahi atu (Other)
6. He aha te tūeke? He aha te take i whakaaro pēnā ai? He mea/peke rapa ki runga i ngā tuara / he pikau 0 1 2 3 M E +P									
7. He aha ētahi mōhiotanga ka puta mai i te rangahautanga wētā? Kua tupu haere te tini, ka ngaro haere rānei. Kei hea nga weta e noho ana. E hia te maha o nga weta. 0 1 2 3 M E									
8. Na te aha ka mōhiotia e nui haere ana te tatau o ngā wētā? E hokihoki mai ana ngā kairangahau ka kitea ngā nohoanga hou, ngā kitenga hou. Kei nga wāhi punanga/pai. 0 1 2 3 M E									
9. Ma te pēhea ka kitea e koe nga weta? Ma te aru haere me te taputapu hopu oro i te reo oro irirangi / haere ki ngā motu / Ka rapu i ngā wāhi pai mo ngā weta. 0 1 2 3 M E +P									
Whakamārama Kupu		/9		Pikitia (Picture Cue)	Pānuitia anō (Re-reading)	Pānui tonu (Reading on)	Mohio (Prior knowledge)	Putanga whakaaro (Knowledge from other sources)	Etahi atu (Other)
10. uwaha (15): he kararehe wahine/kotiro/māmā, he māmā kararehe, he weta māmā /kotiro 0 1 2 3 M E									
11. pūnanga (15): wharau, wāhi piri, he ana, he wāhi huna, wāhi ora, wāhi pai 0 1 2 3 M E +P									
12. kaitā (15): nui, rahi 0 1 2 3 M E									
13. Whakauru (a)/ kuhungia ngā kupu e ngaro ana: Cloze M E Inaianei, torutoru noaiho nga wētā kaitā. Ko te nuinga i <u>kainga</u> e ngā kiore me ngā mauhi. E noho ana ngā toenga wētā kaitā ki ētahi <u>motu</u> . He nui ake ngā <u>uwaha</u> i ngā pūru. Ka mau tūeke nga uwaha. Ka mōhio ko hea rātou e huna ana mā te <u>tohu</u> oro. A muri mai i te <u>toru</u> wiki ka tangohia nga tueke i ngā wētā.							/6		

Appendix 4: Tauria Assessment Guide Sheet

Ngā Kōrero a te Kai Whakamātautau

He Tīmatanga Kōrero

Ko tēnei kaupapa he rapu mōhiotanga mai i tēnei kōrero pono.

Tuatahi, ka pānui koe.

Tuarua ka kōrerotia e koe āu ake māramatanga mo tēnei kōrero pono.

Tuatoru ka pātaingia ngā pātai, māu e whakautu.

Ka hopua a tāua kōrero i te mihini hopu kōrero.

E mārama ana koe ki a tāua mahi?

He patai āu?

Kua pānui kē koe i tēnei kōrero pono i mua atu?

Pānui mai.

Tārua (tia)/ tāruarua (repeat): Retell

Kōrerotia mai anō au ake māramatanga mo tēnei kōrero pono.

Maharatanga: Recall (Questions 2 & 5 only plus prompt)

Ināianei, ka huri ngā pātai ki a koe mo tēnei.

(after answer) Me pēhea koe i mōhio ai?

(prompts) Me pēhea koe i mōhio nā tōu pānuitanga, nā nga pikitia, i roto rānei i a koe tēnei mōhiotanga, nā tētahi atu rānei?

Kohikatanga / Whakataunga/ Hīkaro: Inference (Questions 6 & 9 only plus prompt)

Ināianei, ka huri ngā pātai ki a koe mo tēnei.

(after answer) Me pēhea koe i mōhio ai?

(prompts) Me pēhea koe i mōhio nā tōu pānuitanga, nā ngā pikitia, i roto rānei i a koe tēnei mōhiotanga, nā tētahi atu rānei?

Whakamarama Kupu (Question 11 only plus prompt)

Whakamāramatia mai tēnei kupu.

(after answer) Me pēhea koe i mōhio ai?

(prompts) Me pēhea koe i mōhio nā tōu pānuitanga, nā nga pikitia, i roto rānei i a koe tēnei mōhiotanga, nā tētahi atu rānei?

Whakaurua / kuhuna ngā kupu e ngaro ana: Cloze

Mea nei tētahi kōrero mai i tēnei kōrero pono.

E ngaro ana ētahi kupu. Kuhuna/tuhia ngā kupu e ngaro ana.

He Kōrero Whakamutunga

Kua pānuitia pukapuka e koe i tērā wiki?

He aha ngā pukapuka i pānuitia i te kura?

He aha ngā pukapuka i pānuitia i te whare pukapuka?

He aha ngā pukapuka i pānuitia i te kāinga?

He māmā, he uaua rānei te rapu mōhitanga mai i te kōrero pono?

Ki a koe, he māmā ake te whakautu pātai i roto i te reo Maori, te reo Pākehā rānei?

Kua mutu tāua, kia ora mo tāu tautoko i tēnei kaupapa.

Appendix 5: Scoring Criteria for tauria assessments

Nama		Accuracy rate:		Otinga			/55		
<p>1. Tārua (tia)/ tāruarua (repeat): Retell / 16</p> <p>Definition: <i>Tāruarua</i> is defined as the restatement of the major information-structure propositions <i>about</i> the text, assessed under Content and Sequencing.</p> <p>Te reo Māori does not have to be assessed in relation to its consistency with text.</p>									
<p>Content</p> <p>0 = No response, incorrect response or unconnected comments 1 = 1-2 main points mentioned 2 = more than 2, less than half of main points mentioned 3 = over half to all of main points mentioned 4 = almost all / all main points mentioned with a sense of the genre of the text as expository / information text.</p>	<p>Sequencing</p> <p>0 = No response, incorrect response 1 = No logical sequencing of main points; disorganised presentation of ideas 2 = 2 or more but less than 1/2 points following logical text sequence 3 = over half of main points following logical text sequence 4 = Coherent, logical sequence of almost all / all main points presented as an integrated whole that summarises article.</p>	<p>Te reo Māori Vocabulary</p> <p>0 = No response 1 = small no. of words, used repeatedly, may include predominance of English vocabulary / utterances. 2 = A range of vocabulary. Minimal or relevant repetition of vocabulary. May include English words / phrases other than those in text, which integrate into meaning of Māori utterances. 3 = A greater range of vocabulary than 2. Minimal use of English, except for English from text. 4 = A range of vocabulary which includes different types of lexical items e.g. nouns, adjectives, verbs, etc. Embedded lexical items e.g. nouns or pronouns. Almost no / no English except for English from text.</p>	<p>Te Reo Māori Grammar and structure</p> <p>0 = No response 1 = Single-word or telegraphic utterances (3-4 word maximum). May include English syntax, syntactic language mixing. 2 = small no. of grammatical structures used repeatedly. Highly likely to contain grammatical errors. May include English words that integrate into meaning of Māori utterances 3 = A range of grammatical structures used (at least 3). May include exploratory use (i.e. not all strictly grammatically correct) of personal possessives, negatives, passive constructions. 4 = Full, complex sentences. A range of linguistic and sentence structures used e.g. personal possessives, negatives, conjunctions, passives. Almost all are used correctly.</p>						
<p>Maharatanga: Recall 0 1 2 3 /12</p> <p>Definition:</p>		<p>Pikitia (Picture Cue)</p>	<p>Pānui tonu (Reading)</p>	<p>Pānuitia anō (Re-reading)</p>	<p>Mōhiotanga (Prior knowledge)</p>	<p>Putanga whakaaro (Knowledge from other sources)</p>	<p>Etahi atu (Other)</p>		
<p>0= No response. Incorrect response 1= Correct English response 2= Correct Māori response 3= Correct contextualised Māori response</p>									
<p>Whakataunga: Inference 0 1 2 3 /12</p> <p>Definition:</p>									
<p>0= No response. Irrelevant inference 1= Relevant English inference 2= Relevant Māori and/or bilingual inference 3= Contextualised Māori inference</p>									
<p>Whakamārama Kupu: Meaning in context 0 1 2 3 /9</p> <p>Definition:</p>									
<p>0= No response. Incorrect meaning 1= Correct English meaning 2= Correct meaning (Māori) 3= Correct contextualised Māori meaning</p>									
<p>13. Whakaurua / kuhungia ngā kupu e ngaro ana: Cloze M E /6</p> <p>Vocabulary choice must maintain the meaning and grammatical structure of the sentence.</p>									