

Ko tō ringa ki ngā rākau a te Pākehā –
The use of digital resources in the learning
and teaching of *te reo Māori*: A case study

Elisa Margaret Duder

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Dedication

For Mukai and Mukai Michael John

In the knowledge that our son, and his generation,
will carry on the dreams, aspirations and visions of their *tūpuna*.

*E tipu, e rea, mō ngā rā o tōu ao;
ko tō ringa ki ngā rākau a te Pākehā hei ora mō te tinana,
ko tō ngākau ki ngā taonga a ō tīpuna Maori hei tikitiki mō tō māhunga,
ā ko tō wairua ki te Atua, nāna nei ngā mea katoa.*

Apirana Ngata (Ngāti Porou) in Hutt Valley Tribal Committee (n.d)

Grow and branch forth for the days of your world, your hand to the tools of the
Pākehā for the welfare of your body, your heart to the treasures of your ancestors
as adornments for your head, your spirit with God, who made all things.

Apirana Ngata (Ngāti Porou) in Mead and Grove (2001)

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Attestation of Authorship

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

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Abstract

Te reo Māori (the Māori language) is the heritage language of the indigenous people of New Zealand. Since official colonisation by the British in 1840, the impact of successive Government policies, post-WW2 urbanisation and English-language dominance, have all contributed to significant Māori-language loss.

In the 1970s it was realised that Māori as a language would not survive into the next millennium with the decline of the number of native speakers and intergenerational language transmission. Since then, efforts have been made in the revitalisation of *te reo Māori*, pre-eminent among them the establishment of a Māori-medium schooling system; legal and political recognition of the Māori language; an increase in Māori language broadcasting; and successful *marae*-based (courtyard and building around the meeting house) and community-based movements aimed at teaching *te reo Māori* to adults.

This project looks at one aspect of Māori language revitalisation: second language learning located in a Māori Development Faculty of an Auckland tertiary provider. The teaching and learning is based on the *Te Whanake* series written by Professor John Moorfield. The *Te Whanake* series illustrates the development of language-learning resources over the last thirty years, with the transition from textbooks, tapes and CDs to include a range of online digital tools.

This research used a mixed-methods approach to explore both the learner and teacher experience of the digital tools in the second language learning of *te reo Māori*. The research supported the notion that the successful use of digital tools in educational contexts required a sound pedagogical knowledge of how digital resources can be used. The research highlighted the critical role teachers had in linking *tikanga Māori* (Māori customs and values), pedagogy and technology so that resources capitalised on students', and teachers', digital and cultural capital.

The research process involved a non-Māori researcher in a Māori context. This experience was considered against the development of a Kaupapa Māori research methodology. Despite decades of literature and discussion on research methods in Māori contexts, there are only two major methodologies available to the New Zealand researcher. On the one hand is the

Western tradition of objectivity and neutrality, with its assumptions about the access to knowledge. On the other hand there is the Kaupapa Māori (practices based on Māori customs and values) methodology based on Māori customs and values such as *tapu* (restriction and respect), *koha* (reciprocity and acknowledgement) and *aroha* (compassion and empathy).

To avoid the dichotomous position of these two methodologies, a new research methodology is proposed. It is framed around the process of crafting *tukutuku* (ornamental lattice work) panels to illustrate how the Māori and western tradition could be “re-framed” for Pākehā undertaking research in Māori contexts, or indeed research based in New Zealand.

The project concludes with observations about the combination of *tikanga Māori*, Māori pedagogies and an in depth knowledge of educational technologies, and the importance of these in learning *te reo Māori*. It provides a model for learners of *te reo Māori*, based on those three elements called *He Anga e-Whakaako Reo*. The Faculty’s wider contribution to Māori language revitalisation was also considered. The learners, teachers and resources explored in this research project not only had to deliver academically-rigorous content, but must also maintain the integrity of a threatened indigenous language, which is nothing less than a culture’s link between its past and future.

Preface

Māori Language Conventions

Māori words have been italicised to indicate that the word is being used with reference to its meaning in *te reo Māori*. Many Māori words, the word Māori being a good example, are now considered part of New Zealand English and therefore are not italicised. The correct spelling of Māori is with a macron over the ‘a’ to denote a long vowel. Many texts referred to and quoted have not used this convention and the original spelling of Māori without a macron has been retained in these quotes.

Second Language Conventions

L2 has been used throughout this thesis to refer to second language teaching and learning.

Researcher’s Background

I am a Pākehā New Zealander, with ancestors of British and European ancestry. I was born in London, where my father was working with a large engineering corporation, which then sent him to Pakistan when I was six weeks old. We moved back to New Zealand so I could start school on Auckland’s North Shore.

My sisters and I are direct descendants of Thomas Duder and Margaret Dunne. Thomas Duder had been shipwrecked on the HMS *Buffalo* in Mercury Bay in July 1840 and decided to remain in a new colony rather than return to England. He and Margaret were among the first colonial families of Devonport in the early 1840s. They lived on Takarunga/Mt Victoria, where Thomas Duder was signalman for the small town of Auckland. My sisters and I grew up not far from the mountain our ancestors had lived and worked on over a hundred years ago.

As a teenager, in the mid-1980s, I decided to leave my large, mostly Pākehā, girls’ high school on the North Shore to experience another part of Auckland. I enrolled in Ngā Tapuwae Community College in Mangere.

From Ngā Tapuwae I went to Auckland Teachers’ College and chose Māori language as an optional topic. Around this time, I was watching *Te Karere*, a Māori language news programme, with a friend from Teachers’ College. I was pestering her to know what they

were saying and she snapped, “If you want to know what they are saying, learn to speak Māori!” This seemed an extraordinary suggestion at the time and although it wasn’t acted on immediately, the comment remained with me.

I left Teachers’ College to teach in rural south Auckland for a year, and then worked in a Māori bilingual unit in South Auckland. This experience, like Ngā Tapuwae, reinforced strong lessons about my own ignorance.

In the early nineties, I went sailing in Europe. Most of the European sailors I met were extremely interested in New Zealand, and especially in the indigenous people and their language. All of these sailors, many from the Netherlands, France and Scandinavia, were bilingual if not multilingual. They seemed genuinely surprised that I did not speak Māori as well as English. New Zealand had two official languages and Māori was one of them. The European attitude to language and multilingualism had a considerable impact on me then and still does today.

All these experiences contributed to decision to return to New Zealand and going to The University of Waikato to study for the Bachelor of Arts, Te Tohu Paetahi. At the time the department included luminaries of the Māori-speaking world: Te Wharehuia Milroy, Tīmoti Kāretu, Hirini Melbourne, Te Haumihiata Mason and Te Rita Papesch.

This group of lecturers and tutors was continuing a legacy of fighting for the *mana* (status and power) of the language promoted by Ngoi Pēwhairangi, John Rangihau, Hoani Waititi and Pei Te Hurunui Jones. To me, a young Pākehā woman, the lecturers in the department lived and breathed a passion for Māori knowledge, customs and language that was inspiring and infectious.

Perhaps my greatest fortune was to be able to watch a Pākehā amongst this group. John Moorfield’s humble, but absolute commitment and respect for the language and its speakers, had an enormous impact on the small number of Pākehā students enrolled in Te Tohu Paetahi.

After teaching positions in Auckland within Samoan and Jewish language communities, I worked for two years at the Waitangi Treaty Grounds in the Bay of Islands. This job led to

working in Wellington for a company under contract to manage Te Kete Ipurangi, the Ministry of Education's online community for teachers in preschool, primary and secondary education. I was in a small team to manage and create content under the broad term "Māori education". This role exposed me first-hand to the potential of online and digital technologies in the classroom.

It is hoped that this work contributes to the continued fight for the *mana* of Aotearoa's indigenous language. That the language survives to the extent it does after over 170 years of colonisation, is testament to the Māori language community's dedication and stamina. New Zealand, as a nation, has yet to respect the language to the degree that it should. The expansion and inclusion of *te reo Māori* into digital technologies must be integral to its recognition as the indigenous language of Aotearoa, and its role in supporting and encouraging the retention and revitalisation of other indigenous languages.

Māori Language Landmarks¹

C 950 AD	Kupe discovers Aotearoa – different <i>iwi</i> (tribes) have varying traditions as to the first arrival of Māori in Aotearoa. Subsequent voyagers bring with them a language with close links to Rarotongan, Tahitian, Hawaiian and others of the Proto-Central Eastern subset of the Proto-Austronesian family, which also includes Indonesian, Taiwanese and Madagascan (Ka'ai, Moorfield, Reilly & Mosley 2004).
C 1800	Māori language – with regional dialects – develops independently from its related Polynesian languages.
1807	Dr John Savage records the language but uses inconsistent conventions (Ka'ai et al 2004).
1815	Kendall's vocabulary and grammar printed in the Bay of Islands <i>He Korao no New Zealand</i> .
1820	Publication of <i>New Zealand's First Written Language. A Rare and Valuable Manuscript of 1840</i> . The first transcription of <i>te reo Māori</i> , by Professor Samuel Lee with Hongi Hika and an unnamed person from Waikato in England. Publication of <i>A Grammar and Vocabulary of the Language of New Zealand</i> , by Lee, Hika and one unnamed author, in English.
1835	Printing press established in the Bay of Islands.
1840	Signing of Treaty of Waitangi, Bay of Islands.
1844	First edition of Williams' <i>A Dictionary of Maori Language</i> , printed in Paihia, Bay of Islands. Seventh edition is still in print.
1847	Education Ordinance Act, stating that for schools to be subsidised they had to teach in English <u>and</u> Māori.
1858	<i>Te Hokioi</i> , the <i>Kīngitanga</i> newspaper produced in Waikato.
1860s	Land Wars in the North, Taranaki, Waikato and Nelson.
1867	Native School's Act enforcing English as the language in the education of 'native' children.
1868	First complete edition of the Bible in Māori in a single volume published in Sydney by Rev Maunsell.
1892	The Polynesian Society founded at University of Auckland.

¹ Adapted and extended from Ka'ai, Moorfield, Reilly & Mosley (2004)

1914-1818	World War One
1939-1945	World War Two – major loss of Māori language speakers.
1951	First Māori language papers taught at University of Auckland by Bruce Biggs.
1960-	Rapid urbanisation of Māori population begins.
1961	Hunn Report on disparity of educational achievement between Māori and Pākehā children.
1967	First linguistic description of <i>te reo Māori</i> in Bruce Biggs' PhD on the phonology of Māori.
1973	Te Reo Māori Petition, with 30,000 signatures, presented to Parliament by Ngā Tamatoa.
1975	First national Māori Language Week.
1979	Richard Benton presents paper <i>Who Speaks Maori in New Zealand?</i> at the New Zealand's Language Future symposium identifying the impact of a dwindling number of native speakers of Māori. Te Ātaarangi classes started on East Coast of North Island by Ngoi Pēwhairangi and Katerina Te Heikōkō Mataira.
1981	First wānanga established, Te Whare Wānanga o Raukawa in Ōtaki.
1982	First Kōhanga Reo opened in Wainuiomata, near Wellington.
1983	Te Reo-o-Poneke – the first Māori-owned, Māori-language radio station goes to air.
1985	Te Kura Kaupapa Māori o Hoani Waititi opens at Hoani Waititi Marae, West Auckland. 'Kia ora' Affair - Naida Glavish denied right to answer the phone at work with 'Kia ora' and is demoted for continuing to use the greeting. <i>Te Karere</i> , first half hour, five days a week, Māori language news broadcast on TVNZ.
1985	Māori language claim (WAI 11) lodged with Waitangi Tribunal.
1986	<i>Report of the Waitangi Tribunal on the te reo Māori Claim</i> released recommending recognition of <i>te reo Māori</i> as an official language of New Zealand.
1987	Māori Language Act, Tīmoti Kāretu appointed first Māori Language Commissioner. <i>Waka Huia</i> , a Māori language archival series, begins on TVNZ. Kōhanga Reo National Trust established.

- 1989 Broadcasting Act extends Crown's obligation to include *te reo Māori* content in radio and television.
Education Amendment Act passed formally recognising Kura Kaupapa Māori and Whare Kura (Māori medium primary and secondary schools).
- 1990 *Te Ata Hāpara* – Māori language syllabus for primary and secondary schools introduced.
- 1991 Māori Language Amendment Act changing the name of the Māori Language Commission to Te Taura Whiri i te Reo Māori.
Te Tohu Paetahi, Māori language immersion Bachelor of Arts degree introduced at The University of Waikato.
- 1993 Publication of *English-Maori Dictionary*, by H.M. Ngata.
Te Māngai Pāho established to promote Māori language in broadcasting and the media; this leads to development of *iwi* radio stations.
- 1995 National Māori Language Survey of 1995. (Pilot done in 1993.)
The Year of the Māori Language.
- 1997 Publication of the *Reed Reference Grammar of Maori*, by Winifred Bauer.
- 1999 Education (*Te Aho Matua*) Amendment Act recognising philosophical approach of *Kaupapa Māori* education.
- 2001 Te Puni Kōkiri's *Health of the Māori Language Survey* showing approximately 136,000 Māori language speakers.
- 2003 Revised Labour Government's Māori Language Strategy launched to "co-ordinate and prioritise government action towards Māori language revitalisation."
- 2004 Māori Television Service starts broadcasting, now known as Māori Television.
Māori language version of Microsoft Word developed.
- 2006 Te Puni Kōkiri's *Health of the Māori Language Survey* held again.
Te Aka interactive online dictionary launched.
- 2007 Te Reo, Māori language only television channel launched.
Google Māori launched.
- 2008 *He Pātaka Kupu* – first monolingual dictionary of Māori published, in digital and print formats.
Guidelines for the Teaching and Learning Te reo Māori in English Medium Schools: Years 1- 13, published by Ministry of Education, to replace syllabus of 1990.

Te Ipukarea, The National Māori Language Institute established at Auckland University of Technology.

The Health of the Māori Language in 2006 published by Te Puni Kōkiri, claiming a slight increase in the number of speakers.

2009 First Māori Language Expo, *He Huia Kaimanawa*, held by Te Taura Whiri i te Reo Māori in Porirua.

Launch of Google translation tool for *te reo Māori*.

2010 Minister of Māori Affairs, Pita Sharples, announced Ministerial Review of Māori Language Strategy and Sector, and advisory group formed.

Pre-publication section of the WAI 262 claim on *te reo Māori* released by the Waitangi Tribunal. It described the language as ‘near crisis point’. The section on the language released early to be included in the Ministerial Review of Māori Language Strategy and Sector.

Chapter One

Introduction

Te reo Māori is the indigenous language of Aotearoa/New Zealand. It is part of the Eastern Polynesian group of languages which includes Cook Island Māori, Tahitian and Hawaiian. The origins of these languages, and the languages of Samoa and Tonga, can be traced from Polynesia back through Melanesia, South East Asia and Madagascar, off the eastern coast of Africa (Ka'ai et al 2004:36, Howe 2003:86, Kāretu & Waite 1988).

Since the discovery and settlement of Aotearoa approximately 1000 years ago the language has developed independently from other Polynesian languages until the arrival of Europeans nearly 700 years later.

The arrival of European colonisers in the early nineteenth century had a critical impact on all aspects of Māori culture and the language. The long term impact of missionaries, settler and colonial governments, assimilation policies, massive land loss, a punitive education system, colonial attitudes to indigenous communities, two world wars and then rapid post-WWII urbanisation all contributed to dramatic loss of native Māori speakers. This meant that “*Maori* social, cultural and spiritual institutions were eroded, alongside the expropriation of land and resources, the diminution of the language and cultural artefacts and the assimilation of *Maori* into Western society” (Henry & Pene 2001:235).

The 1980s was a critical time for the Māori language. Research published by Richard Benton in 1979 had highlighted the reality of Māori not surviving as a language in the new millennium unless immediate and major action was taken to address the number of Māori speakers (Ka'ai 2004:43). Benton, in *Flight of the Amokura* noted that

From data collected during the sociolinguistic survey of language use in Maori communities between 1973 and 1978, it is estimated that there about 70,000 native speakers of Maori in New Zealand, and perhaps 115,00 who can understand the spoken language with ease. Because of the recent developments in public education...the number of New Zealanders with a superficial knowledge of the language is much greater and continually increasing (Benton 1981:15).

The Māori community, already aware and responding to the seriousness of the situation addressed the issue of language loss (Ka'ai 2004:43). The community looked to its young, while using the wisdom and expertise of its elders.

During the 1980s Kōhanga Reo addressed language revitalisation needs by looking at the younger members of the Māori community. The first Kōhanga Reo was opened in a garage at the back of a house in Wainuiomata near Wellington. The endurance of Kōhanga Reo is a testament to the wisdom, commitment and tenacity of its elders, and in particular Māori women. Although now funded and administered through a central agency in Wellington, Kōhanga Reo is a model of how community-based initiatives can become wider than their immediate community. However, a recent report indicates that the number of children enrolled in Maori medium education is declining (Waitangi Tribunal 2010).

Māori language primary and secondary schools, Kura Kaupapa Māori and Whare Kura respectively, were established to cater for Kōhanga Reo children. These initiatives had an impact on the number of speakers of Māori, but the numbers of children attending Māori medium schools has decreased since the late 1990s and now only 15% of all Māori children are in Māori medium education (Waitangi Tribunal 2010:18).

In another response to language revitalisation needs, Ngā Kaiwhakapūmau I Te Reo Māori, a pan-tribal group based in Wellington in the 1970s and 1980s, and led by Huirangi Waikerepuru of Taranaki, turned to the Waitangi Tribunal, which had been set up to hear claims that the Treaty of Waitangi had been breached.

The Treaty, signed in 1840 by the British Crown and chiefs from most Māori tribes, enabled the British to declare sovereignty over New Zealand. It considered Māori to be British subjects and guaranteed Māori possession of their lands, forests and fisheries. In the Māori language version of the Treaty, which was the one signed by the chiefs, their *taonga* (Treasured possessions) were also guaranteed in Article Two.

Ngā Kaiwhakapūmau I Te Reo Māori lodged a claim with the Waitangi Tribunal in 1985. This is known as the WAI 11 claim. The hearings were heard in Wellington and prominent members of the Māori community came from all over New Zealand. Ngā Kaiwhakapūmau I

Te Reo, argued that the language was a *taonga*, guaranteed in Article Two of the signed Māori language version and therefore due protection and promotion by the Crown.

The Waitangi Tribunal upheld the claim that the language was a *taonga* and recognised Government failing in the support and recognition of Māori as a language of New Zealand. The Tribunal had to consider first the meaning of Article Two and Article Three of the Treaty and the meaning of the word *taonga* and then had to consider if the language was considered a *taonga*.

When the question for decision is whether te reo Māori is a “taonga” which the Crown is obliged to recognise we conclude that there can only be one answer. It is plain that the language is an essential part of the culture and must be regarded as a “valued possession” The claim itself illustrates that fact, and the wide representation from all corners of Maoridom in support of it underlines and emphasises the point (Waitangi Tribunal 1986b:Clause 4.2.4).

The Tribunal, after acknowledging the wider social purpose of the Treaty, concluded:

We question whether the principles and broad objectives of the Treaty can ever be achieved if there is not a recognised place for the language of one of the partners to the Treaty. In the Maori perspective the place of the language in the life of the nation is indicative of the place of the people (Waitangi Tribunal 1986b:Clause 4.2.8).

The WAI 11 claim had an impact that is still felt today. As well as official recognition of the Māori language, it led to the Māori Language Act of 1987, Māori Language Week, and the establishment of Te Taura Whiri i te reo Māori, the development of tribal radio stations, the Māori Television service and Te Māngai Pāho, whose primary function is the funding of Māori language content for broadcast.

The Ātaarangi movement, another community-based initiative, was a further response to the stark reality of the number of Māori language speakers. This was first initiated by Ngoi Pēwhairangi and Katerina Mataira, both of Ngāti Porou, in the late 1970s on the East Coast of the North Island. Classes using the Te Ātaarangi teaching and learning methods are now available all around New Zealand. Despite large numbers attending, it has struggled to remain viable due to a lack of funding and in order to survive, has been attached to a number of tertiary institutions. It is discussed further, later in this chapter.

The impact of the WAI 11 Māori language claim, the Māori Language Commission and a wider understanding of the reality of a decreasing population of Māori speakers led to language revitalisation initiatives becoming the work of government when the Labour Government launched its Māori Language Strategy in 2003. Its aim was for “an overarching framework for the activities and endeavours of whānau , hapū, iwi Māori and Government”. (Te Puni Kōkiri 2003:3). Its main aim was to move into the “next stage” of language revitalisation with a focus on Māori language use in the community and had five 25-year goals.

In 2007 the Office of the Auditor General found Te Puni Kōkiri’s overall coordination of the Strategy to be “variable”. It made 11 recommendations to Te Puni Kōkiri and the other agencies, eight of which were to be included in Te Puni Kōkiri’s review of its Māori language strategy. In 2010, the Strategy has again been under scrutiny with the publication of the 2010 Waitangi Tribunal report which severely criticised it as a “failure of policy” and coming from a “bureaucratic comfort zone” (Waitangi Tribunal 2010:ix)

Despite the coordinated efforts of Māori-medium education and legislation, and substantial increases in Māori language broadcasting among others to address the issue of a dwindling population of Māori language speakers, the figures from research are not encouraging.

Te Puni Kōkiri has conducted two major projects on the Māori language. The first was the National Māori Language Survey in 1995, the Year of the Māori Language. The key findings of the survey were published in 1998 and found that:

- The majority of Māori (83%) had low fluency or do not speak Māori at all.
- Only 8% of Māori adults were fluent speakers of Māori and a third of those were 60 years or over (Te Puni Kōkiri 1998:10).

The next major survey was held in 2006. Its findings were reported in the 2008 publication *Health of the Māori Language*. It said that 51% of Māori adults had some degree of speaking proficiency and noted a change in attitude towards Māori language. It also proclaimed that the 2006 survey “shows significant increases in the number of Māori adults who can speak, to varying degrees of proficiency” (Te Puni Kōkiri 2008a:iv). However, the full report

highlighted that only 4% of New Zealand's total population of around 4 million and only 23% of the total Māori population could speak Māori proficiently (Te Puni Kōkiri 2008a: iv).

However, Bauer (2008) has questioned the reliability of data from both the 2005 and 2006 surveys, and the language question in the censuses of the same year. She discusses the impact of sample errors, two different agencies collecting the data, the low level of ability being used to describe proficiency and the quite different size of the sample groups (5000 in 2001 and 3858 in 2006). She raises concerns over the major difference in the sampling methodologies between the two surveys; the 2001 survey by Department of Statistics was random and the 2006 survey by Research NZ was a sample of city and non-city districts.

Bauer makes some critical observations: a decline in Māori proficiency in the younger age groups (2008:43); a gender imbalance in both the proficiency in the language and numbers of adults speaking Māori; a decline in the number of young people in the higher level of Māori immersion education all raise doubts about Te Puni Kōkiri's glowing statements claiming an increase in Māori speaking proficiency. She proposes important research questions and concludes that research is needed to look not at who *can* speak Māori but who *does* (2008:63 Bauer's italics), and asserts that for Māori to survive we need a critical 80% of the Māori community *speaking* Māori, not just *able* to speak it (2008:66).

Māori language teaching in New Zealand Universities

This section gives an overview of the history of *te reo Māori* in tertiary institutions. Its inclusion in universities is closely tied to that of Māori Studies.

First classes

Hirini Mead, reflecting in 1997 on the introduction of *te reo Māori* as a topic in universities, described it as “disappointingly slow” (Mead 1997:25). And indeed it has been slow. New Zealand's first university opened in 1871, and it was first suggested to have Māori as an academic subject in 1908 (Webster 1998:157). Māori language was first included as a unit for a BA degree by the University of New Zealand (Benton 1981:25). However, Māori language as a subject did not enter universities until 1952 when Bruce Biggs began teaching part time in the small anthropology department at the University of Auckland (Moorfield 2008:1 and Benton 1981:26). The development of Māori Studies and Māori language learning grew out

of this. Now most New Zealand tertiary institutions include a department or faculty providing Māori language and subjects related to Māori history and culture.

Mead accounts for this slowness in Pākehā culture's ethnocentric attitude towards Māori knowledge and the reluctance of Pākehā academics to include Māori subjects by stating that they "believed in the ideology of total assimilation, and probably also believed, as fact, the evolutionary three-step ladder which put Pakeha culture at the top and that of the Maori some distance down" (Mead 1997:24).

Mead also raised questions about the ability of universities to contribute to the growth of the language:

The challenge to universities is to discover new and more effective ways of teaching Māori and to make these new ways available to every group that requests it. We should find out how best to teach children to be native speakers of Māori and explore new structures for dealing with the new demands of our students. We ought to be able to find ways of transforming the pain of language learning into a joy, because this has a bearing on the survival of Māori. We need to explore new techniques of teaching that perhaps make greater use of the marae, so as to reduce as dramatically as we can the time taken to teach a student to become a reasonably competent speaker of Māori. Can we do it in the three years that it takes a student to obtain a bachelor's degree? Should we design a new degree? Or should we set up a new kind of university that best meets our cultural needs? (Mead 1997:29).

He had noted the increase in secondary schools teaching Māori and the development of undergraduate and postgraduate Māori Studies courses at Victoria and Auckland universities as well as some teachers' colleges during the 1970s and 1980s (Mead 1997:26).

In 1991, The University of Waikato introduced the BA Te Tohu Paetahi. This degree focussed on the development of Māori language speakers within the time that it takes to obtain an undergraduate degree. The major focus of the first year is spent taking the beginner to advanced level Māori language papers and then in the following years most papers and course work are completed in *te reo Māori*. The University of Waikato still offers this course and it is still the only university course focussed on the development of proficient Māori language speakers.

The Māori language speaking community responded to the need for the development of expert speakers of Māori. In 2004, Te Panekiretanga o te Reo Māori (School of Māori

Excellence) was set up by well-known experts in the Māori language. Enrolment is by invitation only, as it aims to foster a small but critical cohort of future expert speakers of Māori. It is administered by Te Wānanga o Aotearoa. As the number of native speakers of Māori diminishes, this group will come to have a revered status in the Māori community.

The opportunities for postgraduate degrees in *te reo Māori* remain limited. In 2008, AUT University set up a Master of Arts in Te Reo Māori. It is delivered through interactive technologies linking staff and students from AUT University, Victoria University in Wellington and the Christchurch Polytechnic Institute of Technology. Most universities now include postgraduate degrees in Māori Studies or Development, but postgraduate degrees delivered or written in Māori remain few.

A key development in the status of Māori language in universities was Te Ipukarea, The National Māori Language Institute. Funded by the Tertiary Education Commission in 2008, it has the distinction of combining universities, polytechnics, government agencies, wānanga and Te Ātaarangi in partnership to focus on Māori language research, teaching and revitalisation. This recognises the complementary roles that these organisations have in the retention and development of Māori language speakers.

Alternative Māori language learning programmes for adult learners of Māori

There are two major alternatives for adult learners of Māori. The first is Te Ātaarangi, a *marae*-based community programme. Te Ātaarangi is seen as an alternative to the formal language learning offered in universities and polytechnics. It was developed in the 1970s by the late Ngoingoi Pēwhairangi and Katerina Te Heikōkō Mataira. Ngoingoi Pēwhairangi was a composer of *waiata* (songs) and *haka* (posture dances). Katerina Mataira is well known for a variety of roles within education, publishing and writing.

Te Ātaarangi is based on Gattagno's "Silent Way" method. Highly tactile, it relies on small group teaching with *rākau* (Cuisenaire rods), and encourages students to focus on listening and speaking rather than writing. It favours the immersion method, with all instruction in Māori. Ātaarangi has become a major provider of L2 learning of *te reo Māori* for adults at a "flax roots" level, and since the 1970s has had, according to its website, more than 30,000 learners (Te Putahi o Ātaarangi n.d.). At first a community-based organisation, it has been joined with other organisations, including the Waikato Polytechnic in 1985, and since then

has been with different tertiary institutions. It is with Te Wānanga o Aotearoa at the time of this research.

There is little published research, literature or formal analysis looking at what aspect of Te Ātaarangi encourages such high rates of participation. Mataira completed some formal postgraduate research in 1980, but little has appeared since then (Mataira 1980). According to some students and teachers, one of its attractions is that it is not seen as an ‘academic’ course with a heavy emphasis on gaining qualifications (Mataira, personal communication, 2009). It supports the total immersion method with all instruction, even at the very initial stages, in the Māori language.

Wānanga are another key provider of Māori language courses and resources. Wānanga emerged through the Waitangi settlement process and tribal development. They place an emphasis on tribal history and culture but still work within the formal qualification framework. Wānanga feature more in regional centres and believe in fostering and maintaining strong links with their communities. Most wānanga provide Māori language learning but use a variety of approaches.

The largest wānanga is Te Wānanga o Aotearoa, which is pan-tribal, also attracting Pākehā and Pacific Island students. The smaller wānanga tend to be tribally based, for example, Te Whare Wānanga o Awanuiārangi of Whakatāne and Te Wānanga o Raukawa at Ōtaki.

Adults wishing to learn *te reo Māori* now have a choice of contexts including Te Ātaarangi, wānanga, polytechnics and universities. Over the last thirty years efforts have been made both within and outside the formal adult education system to contribute to Māori language revitalisation, but there is still a need to focus on what methods and resources support the stimulation and development of proficient speakers of Māori. Research into the efficacy and quality of these varying programmes could indicate which contribute most to long-term, successful attempts at Māori language revitalisation.

This research project explores L2 Māori language student and teacher experience of a set of digital tools and resources designed to support second language learners. Chapter Two will review the literature on Māori and access to information technology, exploring new developments in the impact technology is having on L2 pedagogy. The third chapter provides an overview of the resources and the learning context that they are being used in. The

methodological framework is outlined in Chapter Four and is followed, in Chapter Five, by an outline of how this impacted on the methods for collecting qualitative and quantitative data. The application of the research methods led the researcher to propose a new research model. The initial exploration of this model is discussed in Chapter Six. Chapters Seven and Eight look at the results of the qualitative and quantitative data respectively, and attempt to locate these with similar and related research. The final chapter endeavours to provide a model for how digital Māori language resources can be developed and used in L2 learning contexts. From the analysis of the data it is suggested that three elements be woven together in the future expansion of digital resources. The quality L2 learning of *te reo Māori* is part of a bigger picture of Māori language revitalisation efforts in the development of proficient speakers of *te reo Māori*.

Chapter Two

Literature Review

This chapter considers the role and impact of Information and Communication Technologies (ICT) on teaching, especially L2 teaching. Current research on the integration of technology and L2 education is considered. Because the body of literature specific to the integration of technology and *te reo Māori* is so limited, there is the need to go offshore to look at the experience of other languages. It is important that the unique features of Māori language learning do not get “lost” in the pressures of international commercialism and globalisation.

The impact of the use of technology in education is also examined and how technologies may be impacting on pedagogy. This will contribute to the development of culturally and technologically-responsive pedagogies.

Māori and Access to Information Technologies

Access to information and communication technologies has become a major social, economic and educational issue and is critical for being an engaged citizen in the modern age (Thompson 2009). The Ministry for Māori Development, Te Puni Kōkiri, describes access to ICT as an important factor in economic growth, educational achievement and social communication (Te Puni Kōkiri 2001).

Access to the Internet in New Zealand homes, an indicator of an ability to use information technologies, is increasing rapidly. In 2006, 65% of all households in New Zealand had access to the Internet, but by 2009, the figure had increased to 75% (Statistics New Zealand 2009). More than a million homes in New Zealand now have broadband. This is nearly three-quarters of all Internet subscribers (Statistics New Zealand 2009).

The term “digital divide” describes the gap between information “haves” and “have-nots” or in other words, who has access to the Internet and who does not (Te Puni Kōkiri 2001). Research over the last ten years has indicated that a lower percentage of Māori have access to the Internet than non-Māori.

A Statistics New Zealand's 2004 report based on the results of the 2001 Census highlighted the state of the digital divide:

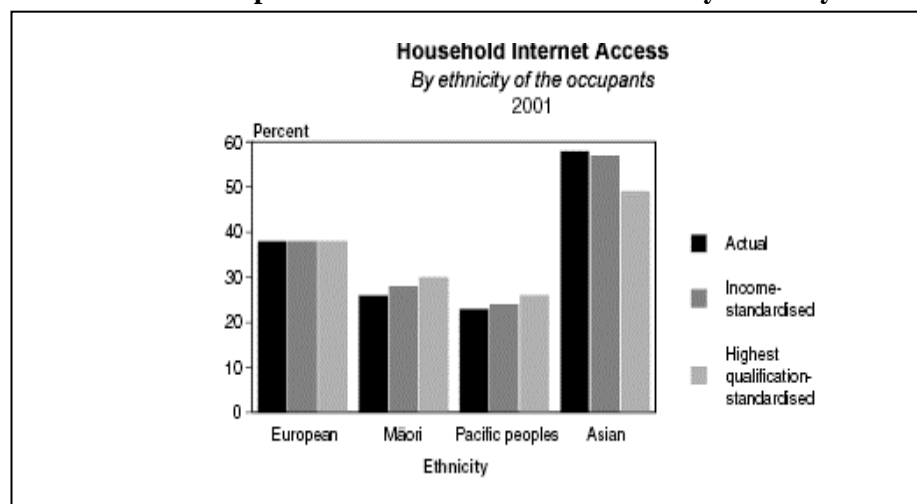
Data presented in this report show that a digital divide exists in New Zealand. Some households are less likely to be connected to the Internet than others. The results of this report reflect international research, which suggests that the expansion of information communication technologies is mainly utilised by households with higher incomes, and households whose members have formal educational qualifications (Statistics New Zealand 2004).

Brett Parker (2003: 460) accounted for the lower rates of Māori access to ICT:

- Internet access relies on a telephone connection. Māori are less likely to have connection to a landline telephone and more likely to have mobile phones.
- Household incomes are significantly lower for Māori than for non-Māori. Income is related to the level of education.
- Internet access is linked to educational achievement. The higher the level of qualification the more likely people are to have access to the Internet at home.

The 2001 Census of Population and Dwellings revealed the same picture. Note the link between income and high educational achievement in the graph.

Graph 1: Household Internet Access: By ethnicity of occupants, 2001



(Source: Statistics New Zealand 2004)

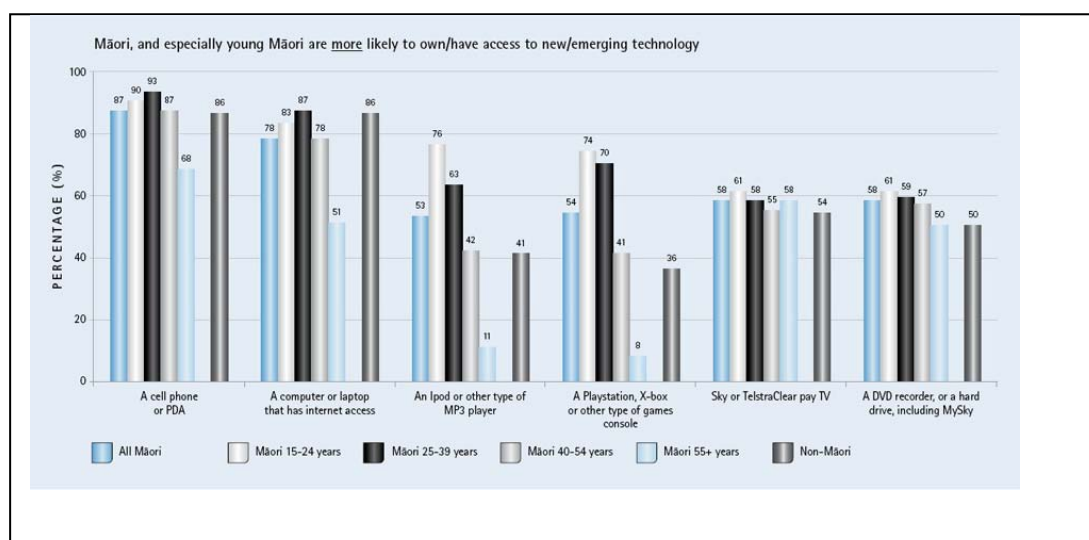
However, Parker noted that Māori households have a “rapid uptake of technologies” and suggested that if the Internet was through mobile phones and gaming consoles this could

impact on the digital divide, as the rates of Māori ownership for these was higher (Parker 2003:458).

In 2008, Te Puni Kōkiri and the Ministry of Culture and Heritage commissioned research to look at New Zealanders' use of broadcasting and related media (Te Puni Kōkiri 2010a). Obviously the sample group was significantly smaller than the Census.

The research indicated that Māori access to computers connected to the Internet is still less than that of non-Māori – 78% for Māori compared to 86 % for non-Māori (Te Puni Kōkiri 2010a). But the research revealed that the lower rate of Māori access to technology is not consistent across all technologies. In fact, Māori access for some technologies is higher than that of non-Māori, particularly with hand-held devices such as mp3 players and mobile phones, as shown in Graph 2.

Graph 2: Māori access to new and emerging technology



(Te Puni Kōkiri 2010a:6)

The research confirmed that younger people, both Māori and non-Māori, are accessing hand held-media players and cell phones more frequently and for a wider range of uses. This confirms the need to provide emerging technologies in language learning, as most students are in this age range.

Access to Māori language and cultural content was a further area of focus in the research. Māori are more likely to access content in Māori (88%) than non-Māori (51%). Access to Māori language was still mainly through television rather than through radio or websites.

The recent research by the World Internet Project's on New Zealanders' use of the Internet confirms that the digital divide is decreasing. The Asian community has the highest level of access (97%) with Māori, Pākehā and Pasifika all around 80% (Smith, Smith, Sherman, Goodwin, Crothers, Billot & Bell 2010:38).

A different caution is being expressed. A 2010 OECD working party report looking at how technology enhances educational outcomes warns of a second divide emerging. The researchers observe that:

The importance of the digital divide goes beyond the issue of access to technology. A second form of digital divide has been identified between those who have the necessary competencies and skills to benefit from computer use and those who do not. These competencies are closely linked to students' economic, cultural and social capital (OECD 2010).

There are other issues around access from a Māori framework. Māori commentators feel that caution is needed before applying tools without looking carefully at their impact on the Māori community.

Access plays a big part. If people can't access it (for example, in remote regions), then it [e-learning] is still not really useful...We need to develop e-learning to meet the needs of different communities...Access is a big part of e-learning, we can't do one without the other (Institutes of Technology and Polytechnics, n.d.:20).

Some feel that there is a danger of ICT becoming just "another tool of colonization" (Neal, Barr, Barrett, & Irwin 2007).

Māori have had a head-on with education, policy, and everything else. They have an inherent fear that current colonial attitudes in our education system are being transferred into the future of e-learning for our children (Institutes of Technology and Polytechnics, n.d).

Non-access to ICT impacts on people's participation in education. Māori access to information can also impact on the ability to control and contribute to the development of new content to reduce the risk of repeating previous experiences with a new medium.

Corscadden, at the Manukau Institute of Technology, concluded in her study of 2003, that other issues come into play with regard to Māori educational achievement and addresses the issue of access within an educational context. She noticed that students without access to either a computer or support people with computer skills were “greatly disadvantaged throughout their course of study” (Corscadden 2003:3).

Corscadden suspected that the struggle for her Māori students was different from her *tauiwi* (non-Māori or foreign people) students. She concluded that her Māori students were:

- less likely to have a computer connected to the Internet at home, so were heavily reliant on on-site access
- more likely to be enrolled in a bridging course, and not at the diploma or certificate level
- less likely to have the same level of computer skills, as these are related to access to a computer which is related to educational achievement.

But her research also revealed that a student’s access to computers was dependent on the department the student was enrolled in, as different departments varied in the number of computers the department provided, and how often they were available for students outside that department. There was a significant difference between the number of computers in the business and humanities departments. It also emerged that the requirement for handing in assignments in specified formats was not supported with access or computer training for students who might be overwhelmed with that expectation.

The key, anticipated finding of the research was the “barrier of cost” of acquiring and maintaining a computer. As Māori were less likely to own a computer, they did not have computer skills prior to starting the course or, the ability to develop them during their course of study.

She recommended providing a dedicated computer space and support person for Māori students, more unscheduled computer rooms for students, reviewing assessment loads to reduce overcrowding in computer labs and evaluation of teaching pedagogies to cater for indigenous students. She also felt there needed to be a greater link between the expectations of the ICT programme and students’ own personal course content, development of an ICT

strategy for both students and staff, and the investigation of national initiatives to get computers in homes to reduce pressure on the institutes' already stretched resources. Her research did not include other technologies like mobile phones or mp3 players.

Corscadden's research is now seven years old. Since then there have been changes in Māori and non-Māori access to ICT, including increased overall ownership of mobile phones and the increased use of social networking sites, among others, but it still provides an example of the impact of access on students.

Research in Technology, Second Language Learning and Pedagogy

The body of literature on the use of technology in language learning is substantial. Research on computer assisted language learning (CALL) began when technology was first introduced into language classrooms with analogue tools. The language classroom can now include a wide range of tools including podcasts, software voice tools, interactive websites, Smart boards and mobile phones.

The literature explores and reports on research into the use of technology in the classroom and its impact on learning and teaching. The use of technologies is taken for granted and seen as an ubiquitous feature of the classroom, but the capacity for teachers and students to use the technologies to their maximum effect is where the attention is now turning.

Yong Zhao, a key writer in this field, describes the impact technology is having on language teaching and claims there is a need to rethink some issues for the future of L2 learning and research and the role of the teacher (Zhao 2005). He reaffirmed the role of the teacher in conjunction with learners and the learners' perception of the digital environment.

Zhao summarises five key themes emerging in the use of technology to support language learning (Zhao 2005) and they indicate how the L2 landscape education is changing. The first theme is an increase in accessibility, as Internet use increases alongside the increase in personal computer ownership. This is reflected in the latest report, by the New Zealand part of the World Internet Report, which claims that 83% of New Zealanders *use* the Internet, not just have access to it (Smith et al 2010:2).

Increased capacity for content manipulation is the second major theme. Digital tools and formats allow people to mix texts, images, video and audio to construct new forms of media. Zhao lists digital tools such as SMS voice chat and speech engines but only touches on tools such as avatars within virtual worlds. The increased availability and usability of these tools is the third trend. As the use of the digital tools becomes more and more sophisticated, it becomes easier and easier for people to use them. The tools no longer need huge technological knowledge or infrastructure. Zhao notes that while the technological knowledge needed is decreasing all the time “what is, however, needed is pedagogical knowledge about how to best make use of these materials and tools to effectively improve language learning and teaching” (Zhao 2005:451).

The expanded capabilities of digital tools and the fact that they are getting easier and easier to use and create, are reflected in the fourth trend which is increasing the pressure for more uses of technology within L2 teaching and classrooms worldwide. In his fifth theme, Zhao claims that there has been a shift from technologies supporting learning in the classroom to being able to provide an alternative learning environment, altering the role of “human instructors” from teachers to facilitators. Zhao also suggests a closer link between research and policy so that there is more awareness about what technological features are effective, what practices support teachers and learners in the use of these tools, and how best the tools can interact.

Using Podcasts

There is evidence that podcasts can be used to increase the environment for students to develop “creative acts” (Dale 2008). Dale’s research on the use of iPods found that there were certain conditions that contributed to their successful use. Time is critical: time to learn how to use the new technology and time to learn how to use the tools effectively in the classroom. The other major conditions were technical support from the institution and mediating the rapid rate of obsolescence of technology.

An Australian study looked at the use of podcasts by students and found that the most effective use of podcasts, was for educators to have a clear understanding of the pedagogical purpose of the podcast. Students recognise this and the writers emphasised that resources be created for learning and teaching-related needs rather than for only a technological-related advantage (Taylor & Clark 2010: 396).

Podcasts are one of the resources evaluated in this research project.

New Learning and New Teaching

The ability of technology to change how content is delivered, received, manipulated and constructed is a recurrent theme in the literature (Zhao 2005, Hample & Stickler 2005, Gordon 2001, Kalantis & Cope 2008, McLoughlin & Lee 2008) and it is critical to understand this if technologies are to be used effectively in the classroom. Digital and online tools are not only different in terms of how they transmit knowledge and language, but also require a different approach in the construction of knowledge, and knowledge of different pedagogical approaches.

The challenge now is to identify that change and respond to it. The literature reveals considerable debate about this topic, but much of it agrees that a change in pedagogy may be required to reflect and meet the changes in the access to and use of information and information technologies. Zhao advocates that “in order to help teachers become more effective designers of language learning environments with technology, we need to understand how existing pedagogical practices and strategies interact with instructional possibilities afforded by new technologies” (Zhao 2005:454).

Steven Thorne reviews the use of a number of different technologies in L2 learning. He reflects that the rapid expansion of the Internet is as a social tool not just a technological one. The transformation of communication in educational and personal realms (among others) means that educators should be considering a “new alchemy within second language education” (Thorne 2008:416). He considers research that investigates how computer mediated communication (CMC) – “chat”, forums, blogs and wikis – have impacted on L2 learning and predicts that the “premier L2 educational technology in the immediate future is virtual environment games” (Thorne 2008:437). He cautions about viewing the Internet as a “neutral medium” and that the dichotomy between “real” or face to face, and “virtual” communication is no longer sustainable or desirable. Educators and L2 teachers in particular need to recognise this and be aware of the limitations of technology as well as its benefits. He also warns of the “widening gap” between what is happening outside of educational institutions and the “anachronistic, epistemological prescriptivism” (2008:438) inside them.

Referring to major research done in 2002 he says:

The 2002 Pew report revealed that while nearly all students used the Internet as a regular part of the educational activities, little is known about how the Internet is actually used for schoolwork nor has there been adequate consideration of Internet use as it might substantively inform school policies, practices and pedagogies. As Internet uses expand numerically and geographically, and as Internet information and communication tools continue to evolve, research and pedagogical innovation in the area of CMC and language education will need to continually adapt in response to new populations, communication tools, and emerging communicative needs (Thorne 2008:439).

This of course is not just restricted to language learning pedagogy. McLoughlin and Lee claim that with the advent of new technologies, especially with the possibilities inherent with Web 2.0, a new pedagogy is needed. The key features of “Pedagogy 2.0”, as they term it, are personalisation, participation and productivity. Learners are transforming from passive consumers to active ‘producers’ of information and pedagogies need to “meet the demands of an era where ubiquitous computing and social connectivity mediated by ICT is reshaping academia” (McLoughlin & Lee 2008:13).

But they caution that the “new” pedagogy is not simply offering learners the technologies they are likely to use “...but involves learners in apprenticeship for different kinds of knowledge, practice, new process of enquiry, dialogue and connectivity” (McLoughlin & Lee 2008:12). There is a need for apprenticeship for teachers too and they propose the following as effective and innovative practices:

- Digital competencies that focus on creativity;
- Strategies for meta-learning, including learner-designed learning;
- Inductive and creative modes of reasoning and problem solving;
- Learner-driven content creation and collaborative knowledge-building;
- Horizontal (peer-to-peer) learning and contribution to communities of learning (e.g. through social tagging, collaborative editing and peer review) (McLoughlin & Lee 2008:12).

Hauck and Stickler discussed the issue of pedagogy and the need to create a new “pedagogic framework” (Hauck & Stickler 2006:463). They also see a shift as learners move from being instructed in, to constructing knowledge. They refer to an article by U Felix on e-learning pedagogy and her solution to the imperatives and time constraints of the ideal of language

teaching, which is “to combine high maintenance collaborative tasks of social constructivist teaching with automated activities for the cognitive construction of knowledge” (Felix cited in Hauck & Stickler 2006: 464).

They summarise effective online teaching:

Online teaching takes technical know-how, content that is planned from a pedagogic rather than technological perspective, creative adaption of skills and teaching styles, training of tutors to equip them for work in an environment where – as a result of increasing rate of technological development – the goal posts are permanently shifting, and thus the willingness to change, adapt, question, and improve constantly. Despite the hope of some administrators that online teaching would allow cuts in staff costs, the teacher is very much part of the learning context...as a (co)designer of learning situations, mediator, and co learner in search for information, the construction of knowledge, the development of competences, and the creation of opportunities for real and meaningful communication (Hauck & Sticker 2006:472).

Virtual worlds may force a rethink in pedagogic approaches. Tutors from a course with students embedded within an immersive virtual world with other students and tutors are reconsidering the environment they are using and how best to use it. It is creating a “new approach to teaching and learning that, in many ways is significantly different for those on which educators traditionally rely and those which students typically expect”. This has been labelled as “presence pedagogy” or the P2 model.

The principles of “presence pedagogy” most relevant to this discussion are:

- A shift from telling to asking, reconstructing knowledge together and a cognitive presence;
- Including knowledge relevant to the real lives of learners;
- Inclusivity with knowledge sharing;
- A peer-based approach removing hierarchies of expertise;
- Ongoing mediations between community and co-construction of knowledge;
- Continuous, collaborative and active learning (Bronack, Sanders, Cheney, Riedl, Tashner & Matzen 2008:61).

What is driving this change in the education landscape? Are learners and teachers responding merely to the technology or responding to the environment the technology is created and used

in? Perhaps it is both; the move from the Information age to the Interaction age means we are reacting to the construction of data not just the transference of it (Brill & Park 2008).

How Māori knowledge, language and *tikanga* are accessed and viewed in this environment is challenging and needs consideration so that their integrity and authority remain with Māori, especially if the Internet is seen to perpetuate the idea of knowledge as a commodity. Questions are being raised about how the Māori view of knowledge as a *taonga* and *tapu* can be protected within online environments; further, if “technology is able to be used in a way which is consistent with the Māori learning context and principles of learning” (Bright 1999:39) and specifically about the idea of *kanohi ki te kanohi* (face to face), being an important way of transmitting knowledge and skills (1999:38).

The challenge will be to construct a pedagogy that combines Māori values, customs and world view in the delivery of Māori language, incorporating digital and online learning strategies. How does this then connect with issues of access and skill levels of Māori so that the construction of this new knowledge is accessible? Bright of the Waikato Polytechnic stressed over 10 years ago that the use of Māori knowledge on the Internet must include a face-to-face component as “humanity has primacy over technology” (Bright 1999:38).

Conclusion

In this chapter technology is considered primarily in the context of L2 teaching. Māori language teaching is at a crossroads as technology combines the experience of L2 learning here and overseas. It has to consider the demands of emerging pedagogies, attitudes towards knowledge, access and authority together with *tikanga Māori* to create an inclusive framework that protects the language and its speakers in a new digital era.

A wide range of technologies have been discussed most of which are investigated with students and teachers in this project. The major omission is the use of ‘virtual’ tools and its implications for pedagogy. However, podcasts, online tools, a learning management system and a voice recording tool are evaluated.

Chapter Three

The Development of the *Te Whanake* Resources

The learning of *te reo Māori* as a second language is just one part of the overall picture of Māori language revitalisation. As the number of native speakers diminishes, the role of second language learning increases in importance and relevance in the future of the language.

The first chapters looked at the historical path of Māori language and the teaching of Māori in universities. The use of technologies in language teaching and learning was considered and it would seem that there are major changes occurring in the use and development of technologies in language teaching. This chapter explores the range of resources used in the L2 learning of *te reo Māori* and the resources that are the focus of this research.

Te Whanake

Māori language resources prior to 1990

Before the publication of the first text in the *Te Whanake* series in 1988, there was a limited range of Māori language teaching resources. Foremost among them was Hoani Waititi's two textbooks *Te Rangatahi 1* and *Te Rangatahi 2* published in the early 1960s. Waititi had taught at several secondary schools in the 1950s, and recognised the need for a series of resources aimed at second language learners of Māori. They have been described as “the standard texts for learning Maori at all levels, including university, for decades. They avoided grammatical rules, substituting a sustained use of increasingly complex grammatical constructions” (Ballara & Mariu n.d).

In 1974 Tīmoti Kāretu published the text *Te Reo Rangatira*, aimed at secondary school students. Two cassettes accompanied the book. Long considered an expert in Māori language, Tīmoti Kāretu has been involved in Māori language revitalisation efforts at a Government and community level for decades.

John Moorfield, the author of the *Te Whanake* series, was a teacher of Māori language in secondary schools. When he joined The University of Waikato in 1976, he saw the need for a

set of textbooks and resources specifically designed for developing the receptive and productive skills of adult learners of Māori (Moorfield, personal communication 2010).

This was the reason for creating the *Te Whanake* series:

Initially my main aim was to provide resources for my students that they could use, especially outside the classroom...It was also a response to the increasing criticism by students that the textbooks used by the beginner and intermediate Māori language classes prior to this were from the *Te Rangatahi* series. These books had been written for teenagers, not adults. They were rural based, which did not reflect the background of most students who were from urban areas. The stories were criticised by some students as being sexist – the men and boys did all the exciting activities while the women and girls stayed home doing household chores (Moorfield 1998:4).

Initially the print resources included a set of four graded textbooks from the beginner to advanced level. The oral questions and exercises were on cassette tapes (later CDs). Students submitted their responses on the tapes in a language laboratory. Supporting study guides and teacher manuals for each level were then developed. The teachers' manuals include communicative and interactive group and class activities. The study guides, text books and teachers' manuals were developed alongside the publication of the four textbooks. The process of developing such a comprehensive series involved research, locating appropriate texts, images and audio content, checking and quality assurance by native speakers and lengthy negotiations with producers.

The resources were based on contemporary second language learning (L2) methodologies and in particular on the way that learners in natural bilingual situations acquire a second language. Moorfield acknowledged that *Te Whanake* owes much to the work of Professor Carl Dodson of Wales who developed the Bilingual Method (Moorfield 2008:114).

The bilingual method is based on:

- the way children naturally learn a second language;
- the communicative approach, with language being developed as a tool;
- transition from the first language to the target language to convey meaning until it is all in the target language;
- a clearly defined approach to the teaching of grammatical structures.

Dodson found that “although there are many similarities between first- and second-language acquisition, the two are not the same” (Moorfield 1998:14). He also observed that bilingual children use five essential strategies to acquiring a second language whereas monolingual children use only three. Moorfield, using the Bilingual Method, developed resources that take the learner through from the medium-orientated phase of L2 learning (where the emphasis is on the language itself), through to the message-orientated phase, where the language is used to convey meaning about things other than the language itself. In the *Te Whanake* classroom this means that initially some English will be used to explain grammar points and cultural concepts and context, but the aim is to move into using Māori to convey meaning. This means that by the more advanced level, *Te Māhuri*, the third book in the four-book series, the classes, textbooks and assessments are all in Māori.

Behind the development of the print and digital resources are the following key principles (Moorfield 1998: 19):

1. Independence and maximisation of student-teacher time;
2. High frequency vocabulary and most useful language first
3. Avoidance of lexical sets;
4. Standardisation – dialectal and regional differences are avoided, especially at the beginner level;
5. Limited and varied introduction of new vocabulary;
6. Continual recycling of language items;
7. Limiting the learning of all aspects of a grammar point all at once;
8. Using a variety of exercises to move from medium-orientated to message-orientated communication, i.e. developing a focus on content not language;
9. Initial use of English in explanations of grammar, meaning and usage;
10. Emphasis on cultural contexts;
11. Use of *waiata* – both highly relevant culturally and important linguistically.

The texts now include the *Te Aka Māori–English, English–Māori Dictionary and Index* which includes a guide to pronunciation, essential phrases and definitions of key cultural concepts and encyclopaedic entries on famous people and New Zealand flora and fauna. Idioms, colloquialisms and *whakataukī* (proverbial sayings) are also included because “they are important to communicating in a Māori context and contribute to understanding and

speaking the language in a natural way” (Moorfield 2008:107). The dictionary also indexes words to the explanations and grammar points of the four text books.

Going Digital

The digitisation of the *Te Whanake* resources is part of wider trends in the development of education technology. They show the transition from print-based to digital resources to create and support greater accessibility and interaction between the learners’, teachers and the target language.

Digital and online resources can support a more learner-centred style of delivery. They can extend the range of content, and allow greater access to the language. L2 learners are not so reliant on contact with their teachers for access to the language. Access to native speakers and Māori-only speaking contexts is not as easy for learners of other target languages who can access large communities either in the country of origin or through large immigrant communities. Contact with Māori-only speaking contexts is completely dependent on the willing and resourcing of a small number of organisations: Kōhanga Reo, Kura Kaupapa Māori, Māori Television, the Māori Language Commission, Te Māngai Pāho, and institutions like Te Ātaarangi. It is a huge responsibility for a small number of people and relies on non-Māori funding.

Table 1 illustrates which of the *Te Whanake* resources have made the transition from print to digital resources. All of the online resources are based around the four graded text books: *Te Kākano*, *Te Pihinga*, *Te Māhuri* and *Te Kōhure*².

² See Appendix 2 *Te Whanake* Timeline for further information on the development of the *Te Whanake* resources.

Table 1: *Te Whanake* print and digital resources

Print/Analogue	Digital		
	<i>Te Whanake</i> website	LMS (Learning Management System)	Mobile resources
Student textbooks: <i>Te Kākano, Te Pihinga, Te Māhuri & Te Kōhure</i>			
Teacher Manuals: <i>Te Kākano, Te Pihinga, Te Māhuri & Te Kōhure</i>			
Study Guides: <i>Te Kākano, Te Pihinga, Te Māhuri & Te Kōhure</i>			
<i>Te Aka Dictionary & Index</i>	<i>Te Aka</i> interactive dictionary & index		Apple app SMS text function
Audio CDs of exercises	Podcasts for <i>Te Kākano, Te Pihinga, Te Māhuri</i> and streamed videos for <i>Te Māhuri</i> and <i>Te Kōhure</i>	Podcasts for <i>Te Kākano, Te Pihinga, Te Māhuri & Te Kōhure</i>	
		Wimba Voice Tools for <i>Te Kākano & Te Pihinga</i>	
VHS/DVD of <i>Te Kai a te Rangatira & Te Kākano</i> TV series	<i>Te Whanake</i> TV – streaming videos of the two television series		
	Animations – <i>Te Kākano</i> only		
	<i>Tōku Reo</i> – television series based on <i>Te Kākano</i>		Streamed videos of episodes 1 – 100 (end of 2010)
	Forum		

Te Aka Māori-English, English-Māori Dictionary

Work began on providing selected *Te Whanake* resources online in 2004. The first was the interactive online dictionary *Te Aka*.

The same features listed above for the print version (cultural concepts, famous people, flora and fauna and so on) are included. The digital resources allow for audio, picture and video files to support existing entries, e.g. audio files and images of native birds, images of native plants and famous people. Words can be searched for either English or Māori, but all definitions (or the gloss) are in English³. It is not the only free-to-access online dictionary aimed at L2 Māori learners. Learning Media has an online version of the Ngata dictionary but

³ Since the *Te Aka* dictionary went online Te Taura Whiri i te reo Māori has launched an online version of their monolingual dictionary of Māori, *He Pātaka Kupu*, published in 2008. The print version includes 25,000 head words but work on providing all of these in the online version is still in progress. The gloss for this dictionary is in Māori. www.korero.maori.nz/forspeakers/patakakupu

as far as the researcher is aware this dictionary has remained static since the print version and does not include the development of audio or image files.

Image 1: Homepage of Māori Dictionary



The digital dictionary is updated regularly to include dialectal variations and contemporary words. The print edition featured approximately 10 000 headwords in the Māori-English section but the online dictionary now includes over 13000 headwords in Māori. The purpose-built content management system (CMS) at the backend means the site is updated easily. A search function is included allowing administrators to search for the most commonly entered words and to monitor words that are being entered by users but are not in the current database. These words are then sourced from a range of texts and checked with native speakers.

The site receives as many as 149 000 visits per month, with over half of these being unique visits. Most visits are from within New Zealand but the site is being accessed from all over the world. The average number of words being searched per visit is five to seven. Use of the dictionary peaks during New Zealand's secondary schools' and universities' exam season around October and November and also during Māori language week in July. The total number of visits for the year from 4 December 2009 to 4 December 2010 was 1 193 746.

The most recent developments include functions that allow access to the dictionary through a mobile phone. Students are able to text a word to the database that then responds with the

gloss and index details. Apple users are able to download the complete dictionary to their mobile phone, iPod or iPad.

Image 2: Māori Dictionary Mobile App



Animations

The aim of the animations is to provide short, high quality examples of language related to the topics and themes in the text books, and to provide independent online learning activities. Currently, there are only animations for the *Te Kākano* level but the next set for *Te Pihinga* is in progress. Animations were chosen in preference to short movies even though they were more expensive. The major advantage of animations is that superfluous visuals can be stripped away so the focus is on the language. It is also felt that they appeal to a wider range of ages. There were already two television series, *Te Kai a te Rangatira* and *Te Kākano* with drama episodes in them.

The webbing developed for the first series can be used multiple times, reducing costs in the production of subsequent series. The aim is to have animations for all levels of the *Te*

Whanake series. Currently the animations are only available on the *Te Whanake* website, but can be downloaded to hand-held devices such as the iPod.

Image 3: Homepage of the Te Whanake Animations



Podcasts

The podcasts are a digital version of the original audio content on the tapes, combined with the visual stimulus in the textbooks. They are accessible to students through the *Te Whanake* website and within the provider's learning management system (LMS). They are also available for download from the *Te Whanake* site.

There are advantages, for both learners and teachers, in delivering this type of content online. The first is the reduction in cost to both students and the institution. Students can download the podcasts for free rather than having to purchase the tapes or CDs. The institution does not have to supply expensive, space-consuming language laboratories.

Another benefit is increased accessibility. Students and teachers can access the podcasts, and the Wimba Voice Tool, to submit or assess student work submissions from any computer with an Internet connection.

Image 4: Homepage of the *Te Whanake* Podcasts

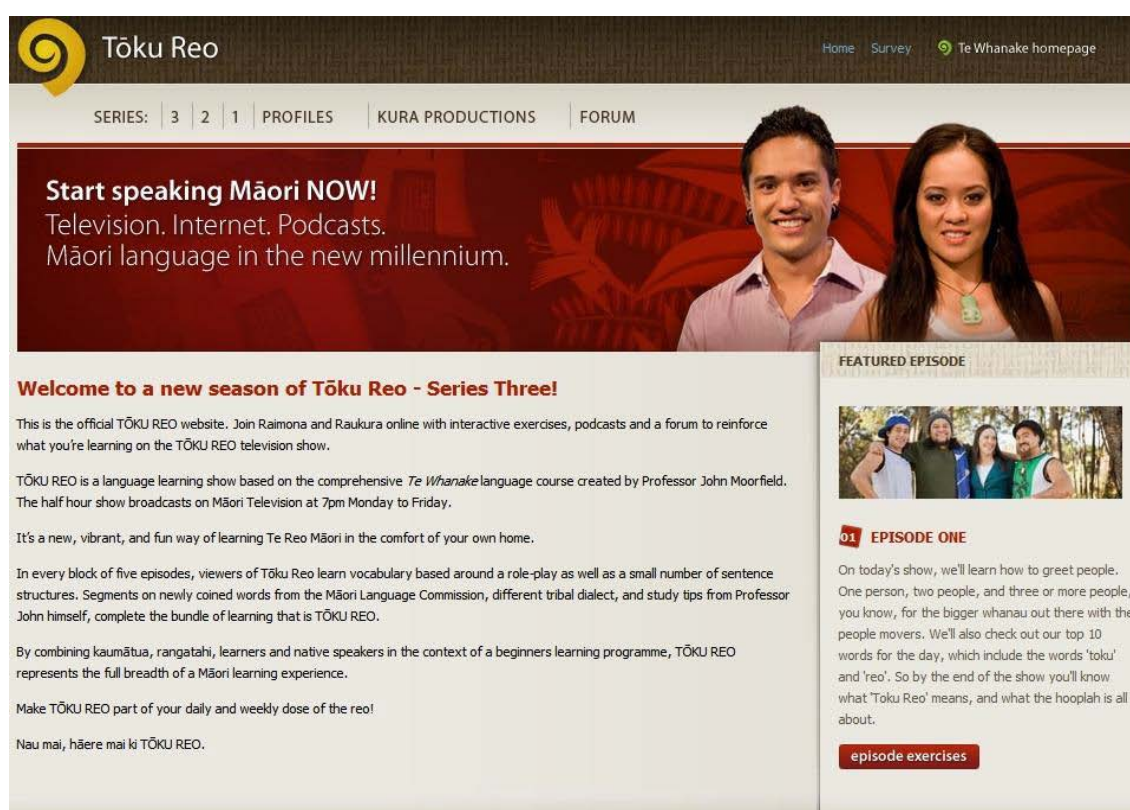


Te Whanake TV

Two television series based on the *Te Whanake* series were developed in the mid-1990s to respond to the need for more audio visual material. These are now also available on the *Te Whanake* TV section of the site. *Te Kai a te Rangatira* was made with eTV at Television New Zealand in 1995. It was the first Māori language television series aimed at tertiary students and involved Te Taura Whiri i te Reo Māori, the Ministry of Education and Te Māngai Pāho. Initially students enrolled in the course were able to videotape the televised programmes. The series was then packaged and made available for purchase as part of the *Te Whanake* resources. *Te Kākano* was then produced due to the success of *Te Kai a te Rangatira*.

These two programmes, which were both transferred from VHS to DVD, are now accessible through a video stream on the *Te Whanake* website. The live streams cannot be downloaded. Each programme is supported with online activities and exercises based on listening comprehension.

Image 5: Homepage of *Tōku Reo*



Tōku Reo

The most recent addition to *Te Whanake* online is the *Tōku Reo* website. It accompanies the *Tōku Reo* series developed for broadcast on Māori Television in 2009, and is aimed at beginners of the language.

The website includes material related to the current episode and will eventually include streamed videos of each episode. It indicates the new direction of resource development to include multiple platforms to meet the learners' expectations to interact, rather than simply view material, and to have multiple chances to view content. Downloads are also included in this for users of iPhone and iTunes.

Funding has been secured for a further 100 episodes for broadcast on Māori Television.

Forums

The forums were developed before the increased use of social networking sites and wikis. The aim was set up a forum particularly for second language learners. Six areas were set up and the most used is the forum related to the Tōku Reo programme on Māori Television.

The LMS and the Wimba Voice Tool (WVT)

All students are required to use the providers LMS. As the provider develops a more blended, e-learning and m-learning approach, all papers are required to contain basic course content within the LMS.

In 2005 two members of the Faculty staff saw the potential for the LMS to deliver content from the *Te Whanake* series, which they were using in their *te reo Māori* papers. One member of the staff was a L2 teacher and one had a technical role within the department.

They had two ideas: the first was to deliver the content previously on the reel-to-reel tapes as podcasts (Mp3 and Mp4 files). The students could then download them to their own computer or media player. They saw the potential for these formats to deliver the content more easily, make it more accessible and to appeal to modern, younger learners.

The second idea was to install a voice tool within the LMS that would mean the students, using any computer with a microphone, could submit their work online. The teachers would then be able to access and assess the students' work through the same process. A Wimba Voice Tool (WVT) was chosen because it was compatible within the LMS and did not require the download of separate software.

The staff members approached Professor John Moorfield to develop content from the *Te Whanake* series as podcasts and digital voice tools. He agreed, and then a move to AUT Provider saw him, the two staff members of the Faculty and a small team of post-graduate students combine the audio content in the tapes with the text and images from the books to create podcasts.

In total about 500 mp3 and mp4 files or podcasts were created for all four levels of the text books. They were placed on the *Te Whanake* website and AUT online. Content for the more advanced books *Te Māhuri* and *Te Kōhure* included audio and video from archival series

Waka Huia. The Wimba Voice Tool was used only for the first two levels of the series, *Te Kākano* and *Te Pihinga*.

The podcasts were completed in 2007 and after staff training they were first trialled in language classrooms in 2008.

The Faculty of the Auckland Tertiary Provider

The Faculty is situated in a Auckland tertiary provider and consider Māori language teaching a major specialisation of the Faculty. At present the Māori language teaching team consists of five staff. All staff teach undergraduate or postgraduate papers in Māori history, culture, leadership and development. The teachers cover papers ranging from *Te Kākano* (beginner level) to *Te Kōhure* (advanced level). Despite being a small group, there is a range of ages, *iwi*, experiences, skills and backgrounds. A major strength of the group is the mix of native speakers, Kura Kaupapa Māori graduates and second language learners. All are Māori.

There is currently a nil-fee policy for *te reo Māori* papers. This is seen as part of the provider's commitment to the Treaty of Waitangi. Currently the Māori language papers can only contribute to an undergraduate degree course, such as the Bachelor of Māori Development. There is no undergraduate degree specifically on the language. However, in 2008, the MA in Te Reo Māori was introduced and involves students from all around New Zealand. This is delivered through interactive technologies between campuses in Auckland, Wellington and Christchurch. As well as a focus on the development of Māori language at a postgraduate level it aims to develop capacity in the use of interactive technologies amongst postgraduate students and lecturers.

In 2010, there were 132 students enrolled in *te reo Māori* papers in the Faculty. They range in ages and backgrounds and include Māori and non-Māori. Some students are enrolled in degree papers, some are only attending night classes for personal interest and do not submit assessments and some are in pre-degree programmes.

Conclusion

This chapter has provided an outline of the *Te Whanake* resources. A chronological overview of the resources can be found in Appendix 4. The print and digital resources of the *Te Whanake* series are being used in the context they were designed for, i.e. a Māori department

of a tertiary institution. The print and audio resources were based on contemporary L2 teaching methodologies and now combine developments in L2 teaching with digital and online teaching tools. It is in this context that the experience of learning *te reo Māori* using online and digital technologies is investigated.

Chapter Four

Kaupapa Māori Research Methodology

This chapter outlines the overarching framework Kaupapa Māori for this research project. This framework is the most appropriate for this project as the resources, topic and participants were located in a Māori context, even though the researcher was not Māori.

The chapter looks briefly at the development of Kaupapa Māori research and its key elements.

Kaupapa Māori Research

The assumed and unacknowledged use of Western positivist models of research on Māori raised questions about the research process, who researched whom and why, what happened to the research and ultimately who benefitted most from it. These questions, and the application of critical theories to many long-held assumptions about the nature and purpose of academic research, led to the development of a framework known as Kaupapa Māori research.

Kaupapa Māori research practice has been described as “deconstructing what is research and re-constructing what is Māori” (Smith in Daniels 2007). It assumes a central place for Māori world views, values and customs in the research process and that the research is then expressed in those terms. Kaupapa Māori as a process provides clear directions on how to conduct research in “Māori ways (Lee in Kaupapamaori.com n.d).

Kaupapa Māori research emerged from influences within New Zealand and abroad. Major language revitalisation efforts in the Māori community such as Te Ātaarangi, Kōhanga Reo and Kura Kaupapa Māori occurred at the same time as major Pākehā reassessment of the Treaty of Waitangi. This occurred at a time in the 1980s, often referred to as the “Māori renaissance”; referring to growing Māori political consciousness which emerged along with the revitalisation of “Māori cultural aspirations” (Bishop 1999:2). The growth of an articulate, indigenous academic voice was part of this.

Overseas, indigenous communities were challenging the way that social and anthropological research was being conducted and then used. This challenge to traditional western research

practices now asserts that research should be *with* indigenous communities not *on* them (Bishop 2008: 440). There is the expectation that it will not just make indigenous people more visible but have some kind of transformative power on society as a whole (Bishop 1999).

The Features and Methods of Kaupapa Māori Research

Five key elements have been described (Walker, Eketone & Gibbs 2006). Although described separately, all of the features are interrelated. All of these elements provided a foundation from which to frame and view the current research.

Tino Rangatiratanga

The struggle for *tino rangatiratanga* (sovereignty or autonomy) is part of New Zealand's cultural and political history. Research is only one area where Māori have challenged power relations. The struggle continues in politics, education, the use of natural resources and cultural expression. The expression of sovereignty, power, autonomy and independence, or *tino rangatiratanga*, is the most important element of Kaupapa Māori research. It is interconnected with all the other aspects. It is the ultimate aim of what research hopes to achieve for Māori.

Social Justice

Kaupapa Māori research is expected to provide direct benefit to Māori and increase capacity within the Māori research community. It is expected to also have some impact on wider issues of social justice in New Zealand. In other words, the research sits within wider expectations and does not occur in isolation from New Zealand's social fabric.

It also challenges existing power relations between Māori and non-Māori. This is particularly in relation to Western-based power structures and paradigms which have contributed to the situation where Māori are seen as “the other in our own country” (Moewaka-Barnes 2000:4). It is expected that Kaupapa Māori research will address unequal power relations for Māori.

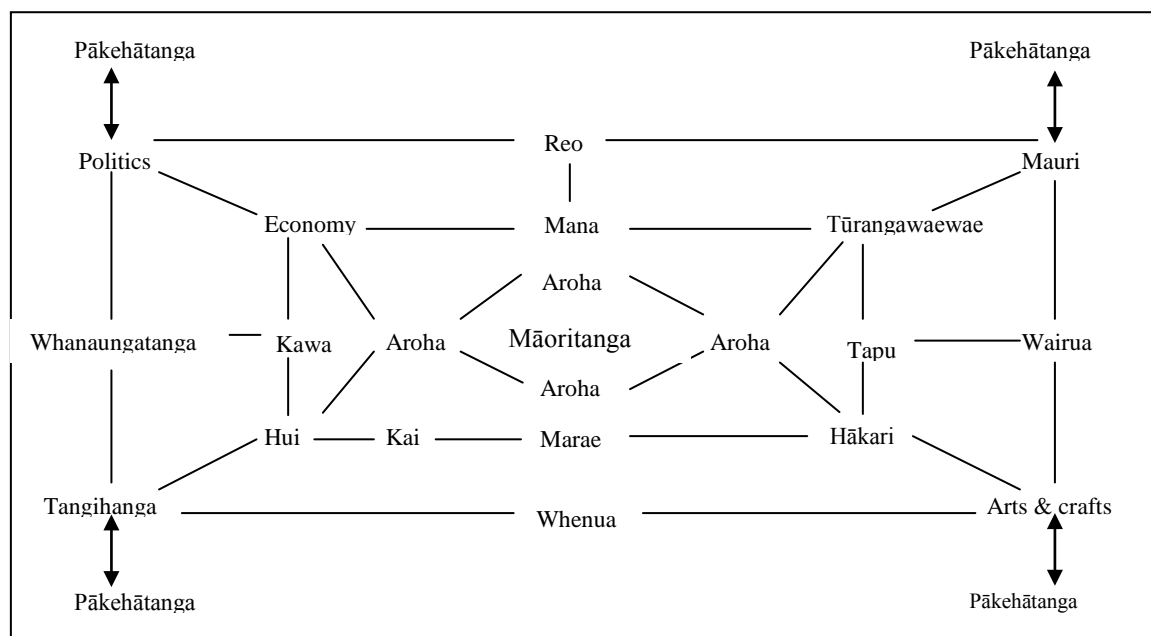
Māori World View

A Māori world view is implicit within Kaupapa Māori research and can be seen in how key cultural concepts are applied in everyday life. They explain a Māori way of existing. Key cultural concepts such as *tapu*, *mana* and *noa* (ordinary and unrestricted) “provide the

foundations from which all other cultural concepts can be understood” (Ka’ai et al 2004:13). There is an emphasis on all things – spiritual and physical – being connected to each other. Humans and the universe are connected through *whakapapa* (genealogical table) (2004:13).

Figure 1 below shows John Rangihau’s conceptual model of “Māoritanga”. He uses central concepts of *aroha*, *tapu* and *mana* but includes concepts like *tangihanga* (funeral rituals), *hākari* (hospitality) and *kawa* (formal and informal protocols) and *hui* (meetings and gatherings).

Figure 1: Rangihau’s Conceptual Model



(Ka’ai et al 2004:16)

Ka’ai and Higgins point out that Rangihau flanks the central concept with the concept of *aroha* (love/concern for others) suggesting this as a core social concept (Ka’ai et al 2004:17). He includes connecting with *Pākehātanga* (New Zealand Culture) to reflect a contemporary reality, but places interaction with Pākehā on the periphery.

Walker, Eketone & Gibbs caution that applying a Māori world view to research requires recognising the Māori approach to knowledge:

Maori view certain knowledge as highly valued, specialized and tapu (i.e., that is contains cultural based restrictions around its use), and therefore must be treated with respect and protected...Important Maori concepts need to be applied within

kaupapa Maori research to ensure that Māori protocols are maintained (Walker et al 2006:334).

Te Reo Māori

Te reo Māori provides the means to articulate and frame critical concepts and opinions. Researchers have noted that “the ideal is to conduct research in the Māori language to gain some information and perspectives which would otherwise not be possible” (Walker et al 2006:334). The lack of researchers who are proficient speakers of Māori means that research using *te reo Māori* is very difficult.

Even research on the Māori language, e.g. Te Puni Kōkiri’s 2001 *Health of the Māori Language Survey* has to manage this dilemma. The interview questionnaires were offered in English and Māori, but as Bauer observed, it took forty minutes to do it in English and over two hours in Māori. Te Puni Kōkiri’s commitment to the very community it is trying to research appears wanting when Bauer notes that those who opted to take the survey in *te reo Māori* were promised a Māori-speaking interviewer but “this did not happen” (Bauer 2008:35). She points out that “this would have the effect of excluding from the respondents a group of people committed to *te reo Māori*, and fluent in it, and would thus bias results against *te reo*” (Bauer 2008:35).

Whānau

The fifth key element of Kaupapa Māori research is *whānau* (family). This is an intrinsic component of the Māori world view as described previously by John Rangihau. Bishop sees this as an essential aspect of the process of conducting research and he developed a research strategy based on the concept of *whanaungatanga* (relationship, kinship) which he describes as “establishing relationships in a Māori context” (Bishop 1998b:130). He uses three key implications of using this model and the concept of *whānau* with Kaupapa Māori research. The first is the maintenance of a *whānau* of interest through “spiral discourse” The second refers to the need of the researcher to include themselves “physically, ethically, morally and spiritually”. The third implication addresses the issue of power and control and their amelioration in participatory research practices (Bishop 1998b:130).

The expectation of researchers to be impartial, independent and separate from the participants or topic is not evident in Kaupapa Māori-driven research. The research *whānau* includes the researcher.

Non-indigenous Researchers and Kaupapa Māori Research

Skilled non-indigenous researchers in Māori contexts reflect and practise the ideals of Kaupapa Māori research. Researchers such as Evelyn Stokes, Dame Joan Metge, Richard Nunns and John Moorfield provide models for non-indigenous researchers exploring Māori concepts and stories and how to participate in a way that contributes positively to the outcomes and experience of the research, while still retaining their own identity as Pākehā.

Research that includes an inclusive, robust respect for appropriate processes and protocols is beneficial for all involved. But it is not for the researcher alone to determine what that might mean. Ultimately the research *whānau* and the community decides what this means and how it is determined (Smith 1999:175). This means that the research terms need to be continually redefined by Māori within Māori research frameworks. This can require the researcher to let go notions of responsibility, control and ownership, and require negotiation and debate. When research is *kaupapa* (topics, policy) driven, as opposed to *researcher* driven, the purpose and appropriate outcomes become clearer.

Applying Māori protocols within a research context is not always as easy as it could or should be. There are many challenges for the researcher working within a kaupapa Māori-driven research framework. Despite extensive literature and over twenty years of experience there is still a need for a greater understanding of how Kaupapa Māori research contributes and supports the ethics requirements of academic research. There is no inherent contradiction between academic ethics requirements and those of Kaupapa Māori-driven research if researchers, participants and ethics committees have a comprehensive understanding of both. Ethical elements inherent in Kaupapa Māori research are expected to be subsumed to “academic” requirements. There seems to still be a tension between the two rather than recognising the complicity between academic research requirements, a need to work with communities and Kaupapa Māori processes.

Conclusion

This chapter has looked at the overarching methodology that was used to frame the research topic and guide the research process. How these concepts were applied in a practical sense with both qualitative and quantitative methods is described in the next chapter. The expectation Māori have that researchers be open and respectful would be beneficial to all researchers. Such research processes needs to lead to the development of a “Kaupapa Pākehā” (Pākehā based) research model. It would include a New Zealand-based approach that respects the role of *tangata whenua* (indigenous people of the land), respects all cultures especially those of the Pacific region and acknowledges the strengths of the academic tradition. This model is proposed and discussed further in Chapter Six which explores an alternative model.

Chapter Five

Methods

This chapter describes the combination of the qualitative and quantitative research methods used in this research project. Precedence had been set with Corscadden's research on Māori students' experience of ICT. She used qualitative and quantitative methods to provide "depth" and "breadth" (Corscadden 2003:3). At the time, Corscadden's work seemed a good model, as the theme and context had similarities. The language teaching team's request to provide group feedback meant that options other than the written survey had to be considered.

Kendall argues that using quantitative methods followed up by a qualitative interview is problematic for two reasons. First, that the "deductive, hypothesis-driven logic of most quantitative surveys does not make for a good fit with the underlying inductive logic of qualitative interviews" (Kendall 2008:138) and second, that the survey can influence the themes and interpretation of the interviews especially in the analysis phase. This means the interviews are just used as "anecdotal colour" and that the interview data can hide and exacerbate weaknesses of the primary survey method (Kendall 2008:139). It is difficult to assess, at this point, how successful this project was in combining these two methods. It may be considered to have worked, as the two methods were used with two separate groups. Without doubt, each method has its own merits, strengths and weaknesses, all which became apparent in this project.

The choice of two different methods was partly determined by the size and makeup of the two groups. Clearly quantitative data would not have been suitable for the very small group of teachers. This decision was based mostly on the makeup of the two groups but not entirely. It did occur to the researcher during the collection of the quantitative data that it may have been worthwhile selecting a small group of students for a focus group discussion to contrast their responses with those from the staff. Lack of knowledge about the two different approaches to collecting data, and an ignorance of how complex the collection of data can be with delays, timetable restrictions, demands on staff and so on, rather than a strategic research decision is behind the clear division of research methods.

Qualitative Method: Focus Group Discussions

This section examines the process of focus group discussions within a Kaupapa Māori framework. Focus group discussions are primarily concerned with eliciting feelings, attitudes and the exploration of meaning (Kendall 2008:133). They were used here to examine the staff experience of the digital tools. The initial intention was for both staff and students to complete a written survey. Early discussions with the staff ascertained that they would rather provide feedback on the resources collectively and verbally, not in writing.

The notion that Kaupapa Māori practice assumes that people within the research *whānau* take part in discussions and that requesting people's opinions, feedback and knowledge is supported by researchers outside of Kaupapa Māori research who recognise that "the key to successfully using focus groups in social science research is ensuring that their use is consistent with the objectives and purpose of the research" (Stewart, Shamdasani & Rook 2007:39). Kendall notes that "the nature of the interview enables the researcher to attempt to see issues from the perspective of the interviewee and to achieve a degree of empathy and understanding" (Kendall 2008: 134). This is an essential element of Kaupapa Māori research methodology, which questions the imperative for researcher objectivity and neutrality.

Best practice for focus groups were identified, and then combined with Kaupapa Māori research practices and discussion modes. This led to the development of protocols for researchers specific to non-Māori researchers in Māori contexts.

Key Strategies for Focus Group Discussion

Key strategies on focus group technique were identified (Putchá & Potter 2004, Stewart, Shamdasani & Rook 2007). Most writers emphasised the need for an informal tone, valuing all responses and opinions and that the discussions are not a test with right or wrong answers. Researchers are encouraged to establish that there is no prescription for how much or little a person can contribute. Other key recommendations included being aware of over-preparation and over-scripting, the use of guiding questions to guide but not restrict or prescribe responses, the use of different types of questions: elaborate and minimal questions, evaluative and descriptive questions, the use non-verbal clues, paying attention to participants, being aware of body language and noting the transcript and finally to focus on perceptions, opinions, beliefs and attitudes.

Most texts assume that participants are not familiar with focus group or research contexts. Therefore, time and attention need to be given to creating a comfortable environment to establish rapport between the researcher, the group and between participants. This researcher was fortunate as the language teaching team are all active researchers, know each other extremely well and were open to the process from the outset.

Focus group discussions in Māori contexts have to combine “academic” research processes with Māori discussion processes. Metge (2001) identifies some aspects of Māori discussion “rites” as having a formal aspect to them, which can include opening the session with a *karakia* (prayer) a formal greeting from an elder or senior member of the group acknowledging different members of the group, and an outline of the purpose or intent of the meeting. She also suggests there needs to be a focus on honesty, openness of purpose, conduct and results and importantly, a flexibility with time, directions and discussion (Metge 2001:29).

Focus group research protocols in Māori contexts

In the absence of any established formal protocols specific to focus group discussions in Māori contexts, the following are suggested to provide guidelines and further points for discussion and development.

Suggested focus group protocols

- All aspects of the research and the research relationships are framed within Māori cultural values;
- All participants, including the researcher, are from within the “research *whānau*”. The researcher cannot expect to be considered objective or impartial or outside of any decisions made;
- It is important to provide a role for the mentoring or guidance by elders for their acceptance and participation by participants;
- All participants have a say in what is to be discussed and how and what happens to the results;
- *Koha* (a gift, contribution or donation) must be provided

- There needs to be careful consideration and selection of appropriate settings – time, venue and the seating e.g. *wharehau* (meeting house), *marae*, and inclusion of informal aspects such as sharing food;
- *Tikanga Māori* and Māori discussion practices are used as the basis for conducting the interview/discussion, depending on the context. It could include:
 - The use of *karakia*;
 - A *mihi* (greeting) to acknowledge and introduce all participants;
 - The use of other modes of response, e.g. *haka*, *waiata*, humour, *whakataukī*;
 - A collective responsibility for the discussion;
 - Leadership from a senior respected and experienced member of the group;
 - The use of Māori language as determined by an individual or the group;
 - A collective, consensus style approach to decision making, including what happens to the results and outputs of the discussion;
- Time limits and time constraints must be flexible, including an awareness of participants' priorities within their *whānau*, *hapū* (sub tribe) and *iwi* (tribe);
- There needs to be informed negotiation between *tikanga Māori* and ethics requirements;
- Certain adjustments of issues and understandings around confidentiality must be provided for.

Confidentiality is a critical, explicit expectation of ethical research, but its place in Māori discussion modes is less widely understood. Metge (2001:35) touches on this, saying “when discussion is over, participants must leave behind any confidential information, grievances or criticisms that have been revealed, carrying away only what is positive and helpful”. The degree to which this is a significant feature of Māori discussion modes is not clarified. When working with participants who might all have connections inside and outside the research *whānau*, confidentiality may have a different relevance. From experience, these expectations would, in many ways, be as strict as, if not stricter, than academic requirements. The differences might be in emphasis, expression and compliance. Further exploration on confidentiality within research from a Māori viewpoint is needed.

Some of the issues around appropriate procedure for focus group discussion in Māori contexts have been highlighted. Acknowledgment of these procedures as being distinct but

vital in dealing with issues of academic rigour regarding “ethical” research, compliance and confidentiality is necessary to develop a research culture that is more inclusive, more respectful and more grounded in New Zealand.

The Research *Whānau*

The research *whānau* included four out of the five *te reo Māori* teachers within the Faculty, the researcher and her supervisors. There were members of Ngāti Porou, Tainui, Ngā Puhī and Tūwharetoa, and two were Pākehā. One of the supervisors is considered an expert in the field of the teaching of Māori as a second language and the other in Kaupapa Māori research methods, indigenous education and contemporary and traditional aspects of *tikanga Māori*. Both have worked closely with the Māori language team in a supervisory role before this project. The researcher’s supervisors took the *kaumātua* (elder) role, providing guidance in *hui*, supporting the direction and methods of the research and providing affirmation to the teaching team of the researcher’s suitability.

Of the four members of the Māori language team who took part in the focus group discussion, two were male and two were female and all are under the age of 40. One is a graduate of Kōhanga reo and Kura Kaupapa Māori and the other three are second language learners of Māori. Some are responsible for teaching non-language papers covering aspects of Māori history and *tikanga*. All are involved with the *marae* attached to the provider campus. Their own research interests include tribal leadership, Kaupapa Māori education, *tikanga wahine* (customary practices and traditional roles of the female) and *kapa haka* (Māori performing arts).

The team members have been teaching as a close-knit team for about three years. They have been willing to share their experience of the digital tools with an expectation that it will acknowledge all aspects of their experience. They specified that acknowledgement of all those who have contributed to the development of the digital tools, including the role of the IT support person. They suggested a list of recommendations that could lead to modifications of future digital resources, which are included in the conclusion section.

Research *Hui Whānau*

By the time of the first focus group discussion in December 2009, the research *whānau* had had several *hui whānau* (research *whānau* meetings) to discuss ethics requirements, outline

progress of the project and make decisions as needed. In the initial stages it was agreed that *hui* were the preferred way to make decisions rather than by email or phone, despite the challenges of getting everyone together at the same time. Meetings were organised through email and reminders by the coordinator of the language teaching team.

Assistance from the research *whānau* on ethics parameters was essential. The Provider's Ethics Committee suggested that a person outside of the Faculty should take the focus group *hui* due to issues of participant confidentiality and anonymity. The issue was due to the researcher also being a Faculty staff member and that issues and opinions raised in the discussion group may compromise particularly the teachers' anonymity and privacy. This was explained personally to the researcher by the Faculty representative on the Ethics Committee. The entire research *whānau* discussed how this issue could be addressed as the Ethics committee's request created a tension between Kaupapa Māori research processes and ethical requirements.

The research *whānau* proposed that, if the researcher could not be part of the focus group discussion, they should select and approach a person from the wider Faculty *whānau* to lead the focus group. The criteria for this person were discussed and names were put forward of people who:

- spoke *te reo Māori*;
- knew the print and digital *Te Whanake* resources;
- knew *tikanga Māori* to take part in Kaupapa Māori-driven research;
- were not employed within the Faculty;
- were known and acceptable to all members of the research *whānau*;
- understood and were comfortable with the ethical restraints.

As the person had to be outside of the Faculty the list of suitable people was not extensive, but a person was identified. It was agreed he would be approached by the member of the teaching team who knew him best. The researcher would then follow up with a phone call and a *hui*. This process was followed and the person approached was very supportive of the research and the *kaupapa*.

During this time, a strong case by the supervisors was submitted to the Provider's Ethics Committee requesting an exemption to allow the researcher to take part, as the project was being done under Kaupapa Māori methodology. As a consequence of this, approval was given for the researcher to take part in the focus group discussion. Had the supervisors not understood Kaupapa Māori methodologies and the practicalities, and had not written to the Ethics Committee, the research could well have been compromised. For example, it is unlikely that a facilitator would have received such full and honest responses.

It is the opinion of the researcher that focus group discussions conducted within kaupapa Māori research can be considered within the parameters of Māori discussion modes. These modes, or rules, are based on *tikanga Māori*. If there is *tikanga* to guide the correct procedure of discussion to ensure participation, protection and confidentiality for all participants, then there is also *tikanga* to assist when things do not stay within "safe parameters".

It is evident that there is an assumption by Ethics Committees that only written, formal protocols can provide protection to participants with issues such as confidentiality, anonymity and disclosure. This assumption is manifest in the expectation that Kaupapa Māori practices can be used if and *after* formal academic requirements have already been met. Recognition of Kaupapa Māori research practices would mean that its own guidelines and practices are considered as having the same credibility and validity as academic traditions. The safety mechanisms for any Kaupapa-Māori based research contexts are in the *tikanga*. If Ethics Committees and researchers have reservations about this, it indicates a lack of understanding about Kaupapa Māori research practices and indeed *tikanga Māori* itself.

This issue revealed itself in the need for the teaching team being required to sign a confidentiality form agreeing to take part in the research. Signing a form was a mere formality. My observation would be that the group's shared trust and knowledge of *tikanga Māori* provided tighter parameters and guidance within the research *whānau* and was considered more important than a printed form. It is questionable whether the same willingness would have been as forthcoming if the research had been conducted outside of *tikanga Māori*, even with the printed forms.

The Focus Group Discussion Process

As stated earlier, the intention of the focus group discussion with the staff was to explore and investigate their experience of using the digital tools in their teaching. The two sets of tools referred to were the digital resources on the *Te Whanake* website, and the tools within the provider's LMS. The only resources common to both websites were the podcasts.

At a previous research *hui*, the teaching team selected a post-graduate writing retreat held on a North Shore marae at the end of the year to have the focus group discussion. They were attending the week-long retreat to work on their own post-graduate research. Both supervisors were there to provide support and guidance if needed but they did not take part in the focus group discussion. It was planned to hold the *hui* in the *wharenui* of the marae, but this was not available at the time, so the group moved to a small room just off the *marae* library. Unfortunately, this meant that the group was not able to view the online tools as we discussed them.

The session began with a short *karakia* and opening *mihi* by the senior male. No introductions were needed as everyone in the group knew each other and the *kaupapa* of the discussion had been discussed in previous research *whānau* meetings. The session was recorded and subsequently transcribed by a person outside the research *whānau*. The discussion followed the written version of the staff survey. The questionnaire was used to guide the interview, rather than restrict it to certain questions. The discussion lasted for nearly two hours. We ended with a closing *karakia*. The staff acknowledged Professor Moorfield personally and his contribution towards the teaching of Māori as a second language. The research team then shared lunch together with the supervisors and the other post-graduate students on the retreat.

In the New Year, the researcher approached the staff to see if they would be willing to have a second discussion to revisit some questions and to clarify some issues raised in the first discussion. Again the team was receptive and a meeting was organised for mid-semester in May to allow for staff travelling overseas, *whānau* commitments and school holidays.

The second discussion was quite different. It was held in the early evening; one member of the team rushed in from a funeral and others were fitting in the session around classes, students, families and marking. The researcher provided dinner to acknowledge the time of day and the team's support. As we reconnected over dinner, we shared the day's sadness,

family anecdotes and work gossip. It focussed attention within the group and gave a “lead-in” process. After clearing up, we moved to a room with a large Smart Board screen to allow us to discuss the tools while viewing them. The researcher had felt this had been a major limitation in the first session. We started with a short *karakia* and *mihi* by the senior male staff member. The researcher outlined the purpose of the second discussion and the interview began. Only the questions that referred directly to the digital tools were revisited. The flow of the questions and the responses was helped by the use of the screen to clarify responses.

The process of developing and conducting focus group interviews in a Kaupapa Māori context has been outlined. It involved skilled guidance and careful negotiation around ethics requirements, the development of a research *whānau* through emails, discussions and meetings and the willing participation of the research group. Two interviews were held with the teaching team to explore and discuss their experience of the digital tools. Their responses are considered in Chapter Seven, which analyses the qualitative data.

Quantitative Method: Written Survey

This section examines the administration and analysis of the quantitative survey to investigate the students’ experience of the digital resources. Aspects of the administration process and some of the challenges that were encountered are discussed. The aim of the survey was to collect quantitative data on student access to and use of the digital tools and their experience of the tools in the second language learning of *te reo Māori*.

In the initial planning stages an online survey was proposed as it was consistent with the environment of the digital resources. A written survey was drafted and the various options for delivering an online survey were explored. The options included an online tool such as Survey Monkey or the LMS.

The options were discussed with the teaching staff and concerns were raised about the validity of using LMS as an assessment tool when one of the questions involved the very use of LMS. Staff queried the ability of LMS to be anonymous if students were required to use their personal logins to see the survey. Discussions with the LMS administrators reassured the researcher that even though the students would have to log in to the LMS to take the survey, it was not possible for the researcher or members of the teaching team to track any one response or a group of responses to any specific log in. Anonymity of student responses

had been a central requirement of the ethics process. Steps were taken to reassure participants and their teachers that student confidentiality was not compromised by taking the survey within the provider's LMS. The need for anonymity within the survey was not challenged by the research *whānau*, although it was being done within a kaupapa Māori framework. This is another contradiction that has to be navigated when working with two sets of ethical parameters.

The major advantage of using the survey within the LMS was that there was no need to set up separate user lists. The Māori language class lists were already set up within the LMS, meaning that students could use their existing username and passwords. Ironically, this very issue, which initially promoted using the LMS's survey tools, became one of the reasons to change to a print-based survey.

The decision was made to create a survey within LMS. However, a written survey does not just transfer to an online one; they are two totally different formats and the survey "environment" has to be taken into consideration when forming the questions. This aspect impacted significantly on the coding and analysis stage.

It was decided to deliver the survey through the LMS. A draft survey was designed with help from LMS staff and a practice run was undertaken with Faculty staff. Constructive feedback was provided on some of the questions, including appropriate student terminology for papers and the order of the questions. All these suggestions were noted and applied to an updated version of the survey. Even at this stage it was noted that the log in issue and "visibility" of the survey might be problematic. This was hard to modify as the LMS system determined the location and layout of the survey. The staff pointed out that students would need careful directions to locate and access the survey.

The survey was piloted with some of the Māori language students at the end of the second semester in 2009. Unfortunately, the response rate was very low. The pilot provided valuable feedback as it reinforced the comments from the first pilot with staff on locating the survey. Few students will complete a survey outside of class time. Only eight students did this.

The pilot with the students drew attention to the issue of timing. To comply with ethics, the researcher was totally dependent on the teaching team to deliver the survey. While they were

fully supportive of the research, their contact with students was limited to only a few hours a week. This “pressure cooker effect” on teacher time with students, combined with the availability of technical support and the need to get through certain topics to prepare students for examination, all meant that the survey was not done. Student participation reflected the levels of attendance and the survey sample was far too small.

The online survey was modified again and the researcher met with staff to determine when the survey could be administered in the first semester of 2010. It was decided that around Weeks 6-8 would be a good time because students would have used the tools and it was before the end of the semester. However, nearer to the time it became apparent that some administrative and technical issues were impeding the use of the digital tools, which meant that the students’ ability to comment and evaluate the tools was compromised.

The first issue related to the restricted use of the language laboratory. Students were restricted to a specific laboratory to submit their work online as it is the only computer suite with microphones. Although it is booked at specific times for the Māori language students this had to fit around other classes using the computer suite.

The next issue was the log in process. The computers in the language laboratory ran dual operating systems. Students are encouraged to use the MAC operating system, but as AUT’s main system has been set up with PCs, this necessitates another log in. This step can be further complicated if students do not log in for a period of time causing their user names and passwords to expire.

The final issue involved the analysis of the survey within the LMS. Although there was an analysis tool within the LMS, due to the way that the survey had been set up the analysis had to be done separately for each class group. The data could not be accessed as an entire group. Consequently, each class would have to be downloaded separately and then combined using an analysis tool. This issue was discussed with LMS administration staff, who provided an alternative procedure.

These concerns and the low response of the 2009 pilot were discussed with the teaching team, the researcher and the supervisors. A colleague who was familiar with the collection and analysis of quantitative data suggested going back to a paper survey to be designed to

increase the response rate and reliability of the data. It seemed prudent to note what had happened in the pilot and consider the options. The teaching team was consulted and they supported the proposal to change back to a paper survey.

In the early weeks of the first semester of 2010 a *hui* was held with the teaching team. If needed, the team could also take the survey during a weekend *wānanga* (conference, seminar), being held with all the Māori language students in Week 8 of the semester.

It has to be noted that the very use of the tools and environment being investigated was, in fact, hindering the research process. It seems remarkable in a digital age that the solution was to revert back to pen and paper. With the benefit of hindsight, it is easy to acknowledge that using a print-based survey would have saved time and frustration. But it would not have been so revealing of the challenges of designing and administering an online survey.

The Survey

The survey was administered by the Māori language staff at the *wānanga* and during class time in the middle part of the semester. The staff explained what the research was for and ensured that students completed the forms agreeing to take part in the research. The total number of enrolled students in the Māori language papers for the semester was 132. Sixty-six responses were collected – a response rate of exactly 50%. Table 2 provides an overview of the number of and level of students in The Faculty.

Table 2: Numbers of students enrolled in Māori language papers

Te Reo Māori students in The Faculty	
<i>Class level and type</i>	<i>Number</i>
Te Kākano (Beginner day class)	33
Te Kākano (Beginner evening class)	62
Te Pihinga – intermediate	24
Te Māhuri – intermediate	13
Total students	132

(Source: Arion Student Management System)

The surveys were not numbered or grouped for each class before being handed out, so it was not possible to see the response rate for each separate class. While not important for analysis, it would have been useful in the administration of the survey.

Coding

All survey responses were coded and entered into an SPSS⁴ file for analysis. The coding of the questions was undertaken with the help of an experienced statistician. The initial coding of the responses was difficult, as the survey had been written without realising that coding needed to be considered when writing the questions. This meant that in the end, some questions could not be coded.

Coding of Ethnicity

Ethnicity was one of the first questions in the survey. At the analysis stage, it was clear that greater consideration should have been taken to be clearer on what the ethnicity question was trying to determine and how it could be coded.

As ethnicity was self-determined, people could identify with more than one ethnicity, meaning that one person could have multiple ethnicities. Therefore the total number for each ethnicity could exceed the total number of participants. The coding of multiple responses required a choice of how to present ethnicity data.

In one option, ethnic groups were prioritised so that each participant was assigned to only a single ethnic group, even if they gave multiple ethnicities. Ethnicities were ranked so that priority was given to certain ethnic groups. This process was totally arbitrary, and was based on the groups of people being researched and the people gathering the data. Statistics New Zealand has discontinued using prioritisation as it conceals ethnic diversity and “may possibly be seen as biasing data towards specific ethnic groups” (Statistics New Zealand 2004 cited in Ministry of Health 2008). It may also mean that “a person will choose which ethnic group or groups that they identify with without being aware that prioritisation may mean they end up in a group that they would not consider their preferred ethnic group if asked to choose only one” (2008:2).

⁴ SPSS refers to the name of the analytic software used for coding and analysis of the data.

The second option looked at the total responses to ethnicity, so one person could be counted for however many ethnicities they identified with. Statistics New Zealand now recommends this approach is used wherever possible as New Zealand's population changes, and more people identify with more than one ethnicity (Statistics New Zealand 2005:2). The total responses method was used in this research project to present ethnicity data. But the prioritisation figures of Māori and non-Māori data were used for cross tabulation with other data sets.

Coding of iwi

Iwi data was counted using the total responses method. Most people who identified as Māori gave their *iwi* and half identified with only one *iwi*; only small number of people gave two or more. Table 3 shows the nature of responses to the question about *iwi*. The results of the student survey showing *iwi* are provided in Chapter Eight.

Table 3: Number of multiple responses to *iwi*

Nature of responses to <i>iwi</i> identity	
Identified with one <i>iwi</i>	20
Identified with two <i>iwi</i>	14
Identified with three or more <i>iwi</i>	5
<i>Iwi</i> not known	1
No response to <i>iwi</i> question but identified as Māori	0
Total number who identified as Māori	40/66

Quantitative Surveys in Māori Contexts

As with qualitative research methods, there are few comprehensive guidelines on how best to apply quantitative research methods within Kaupapa Māori contexts. The following includes observations made during the research process.

The existing tension between ethics requirements and Kaupapa Māori research practices was apparent using quantitative methods. The Ethics Committee required that the researcher not be involved in the delivery and administration of the survey to avoid direct influence on students and the results.

However, if a researcher is asking students for their time and information then they take responsibility to explain and carry out the work. There was room for greater synergy between academic impartiality and the Māori need for integrity and open intentions. The researcher was in fact down the hall when one class did the survey with their lecturer and could hear careful attention being paid to the process. It felt wrong not to be helping and supporting the lecturer.

The most important factor in this research was the lecturers' validation and support. Even though information sheets and participants' forms were distributed and signed by the students, the researcher's observation would be that student participation was helped most by staff advocating for this research and what it would contribute to, in terms of the bigger issue of the efficacy of the digital resources and the use of the digital platform.

Conclusion

Inspired by Corscadden's research and the wishes of the language teaching team, a mixed-method approach was used and the rationale behind two different methods for the two groups explained. The qualitative data was to investigate the teachers' experience, and the quantitative data to explore the student experience. The time factor in learning and combining two different research methods alone would deter the researcher in repeating a mixed-methods approach. Both methods posed challenges and required careful negotiation around external and internal factors. The tension between Ethics and Kaupapa Māori research was apparent in both methods, and how these tensions were navigated has been described. The next chapter will consider further how non-indigenous researchers can participate in indigenous contexts.

Chapter Six

***Kua Timu Te Tai* – The Decolonisation of Research**

This section addresses how non-indigenous, non-Māori researchers could develop a more sophisticated understanding of their role in Māori research contexts. The discussion here is limited to Pākehā as it reflects the background of the researcher. The debate on how Pacific, Asian and other community groups participate is for researchers from those communities. Conventions and protocols are needed to raise expectations of Pākehā contribution to and participation in research involving Māori knowledge, contexts and participants.

The issue of non-indigenous research on Māori – whether it is health, education, language or history – involves the history of colonisation and the struggle for Māori self determination. Not only do Māori recognise research as a political affair, but they now understand the political implications of research by Pākehā researchers (Cram 1997:45). According to Gibbs, “the cross-cultural context of Māori social research has significant methodological implications, some of which have relevance beyond the social sciences and beyond Aotearoa New Zealand” (Gibbs 2001:674).

Pākehā too need to understand the political and methodological implications of academic research on Māori. Researchers like Evelyn Stokes, John Moorfield, Joan Metge and Richard Nunns are examples of Pākehā participating in indigenous research who, from the researcher’s point of view, embody this understanding.

The researcher supports Russell Bishop’s argument that as a Treaty partner, Pākehā have a responsibility to be involved. He acknowledges that there are highly-skilled bicultural Pākehā researchers, but their skills need to be constantly revisited (Bishop 1996). Ranginui Walker sees Pākehā as an essential part of social transformation in New Zealand as Māori, a minority, cannot achieve justice without Pākehā support (Walker quoted in Gibbs 2001:679).

Cram gives Smith’s four research models for non-indigenous researchers and the researchers felt he exemplified that model. Two are based on Māori concepts of participation, the first as being guided (*tiaki*), such as the relationship between James Ritchie and Robert Mahuta, or being adopted (*whāngai*), like Anne Salmond and the Stirling *whānau*. The two other models were based on the intent and outcomes of the research, that is, power sharing and

empowerment. Richard Benton and his socio-linguistic research on the Māori language are given as an example (Cram 1997:47).

Other Pākehā researchers have had guidance and endorsement by revered, respected members of the Māori community. This is exemplified in the partnerships between Richard Nunns with Hirini Melbourne, John Moorfield with Te Wharehuia Milroy and Tīmoti Kāretu, and Evelyn Stokes and John Rangihau. Even though these Pākehā were working in very different spheres, it is suggested that they have knowledge, skills and attitudes in common. Investigation is needed to explore these further.

John Moorfield (2006) has six key recommendations for working with indigenous people. The first is to have the approval of indigenous people through interaction and trust. Second, that the first beneficiaries of the use of any indigenous knowledge are direct indigenous descendants of the holders of such knowledge (2006:115). Third, researchers should observe indigenous protocols and be prepared to abide by them, if it is the expectation of the indigenous group. The fourth recommendation is acknowledgement of the participants and where the knowledge is from. Part of this involves providing copies or editions of any resources back to the community. His final two recommendations consider the process of reciprocation and recognition and are best illustrated as he acknowledges the people who have helped him:

I have no doubt that people like Hoani Te Rangiāniwaniwa Rangihau, Dr Hirini Melbourne and Dr Wharehuia Milroy imparted some of their knowledge to me with the expectation that I would in turn pass on the knowledge to others through my teaching and writing. Some have been mentors who have paved the way for me to continue my work unhindered. Through their support they have deflected any criticism from their own people about access to Māori knowledge being given to a non-Māori. I continue to try to repay the debt I owe those people (Moorfield 2006:116).

Any researcher considering working within indigenous communities would find these recommendations a good place to start.

Evelyn Stokes identified the skilled bicultural researcher as someone who “is not only comfortable in both cultures, but can also stand back and put both sets of cultural values (and the real and potential conflicts) in perspective, will come closest to evaluating Māori research needs” (Stokes 1998:54). Stokes’ comments are revealing as they still imply a degree of

objectivity, with the expectation that a researcher must be able to “stand back” and put cultural values in “perspective”. This denies the researcher’s own cultural values and its impact on the research. Caution is needed in assuming that it is the researcher who evaluates Māori research needs. Kaupapa Māori research methodology is quite clear in advocating that this must be done by Māori. Gibbs, a researcher who used Bishop’s *Whakawhanaungatanga* model for her work with Ngāi Tahu, states that “respectful, open, honest, and timely communication...is the foundation of successful cross-cultural collaborative research” (Gibbs 2001:684).

These discussions all contribute to a wider debate on developing research ethics and practices appropriate for non-Māori in Māori contexts. It highlights the need for a revision of ethics to allow a combination of traditional academic methods from the Western positivist paradigm and those of the Kaupapa Māori paradigm, neither of which some Pākehā researchers fully identify with.

Kaupapa Pākehā Research

A new research framework is needed, one that is reflective of our colonial past, Pākehā culture and society, the Pākehā relationship with *tangata whenua*, our landscape and other Pacific communities. It could drive the development of a new philosophical base and new ethical approaches and practices. It requires, first of all, that Pākehā researchers have a deep and sophisticated understanding of their own cultural backgrounds, histories and narratives, a strong experiential knowledge of Māori cultural concepts around knowledge and *tikanga*, and that these are embedded in their own research practices. This would contribute to research being *for* Māori not *on* Māori (Cram 1997:44).

A new framework could also address the issue of ‘Pākehā paralysis’, referred to by Martin Tolich (2002). He feels that the dominance of a Māori-centred paradigm has “frozen” Pākehā participation as it focuses more on their exclusion rather than inclusion (Tolich 2002:171). Currently “Pākehā researchers are advised to exclude Māori on the basis of not having the cultural sensitivity to research Māori” (2002:176). Tolich proposes that the cultural safety model used in nursing education would be a “home-grown remedy” and the dominant Māori-centred research paradigm needs to recognise this Pākehā problem so that Pākehā can establish their boundaries (Tolich 2002:176).

This statement is entirely valid, but the mechanism by which this is achieved, that is, “cultural safety”, is questioned. The problem arises if there is no common understanding about what the term actually means, when priorities have to be made on whose cultural safety is paramount, knowing who and when a context is culturally safe, and how that is determined? Different researchers will place a different set of values on cultural safety. Another concern would be the defensive position that Pākehā researchers might be placed in, if the assumption is made it is their culture that is “unsafe”.

The dominance of a Māori-centred paradigm with a strong and recognised methodology, by and for Māori, has created a vacuum, or “paralysis”. Pākehā, still negotiating understandings around the Treaty of Waitangi within our own community and with Māori, must develop our own research paradigm to stand alongside the Māori paradigm. A possible resolution to this dilemma is proposed further on in this chapter. The following section identifies issues that led the researcher to this position.

Key traits of researchers working in Māori contexts

The success of any research is very reliant on the social skills of the researcher. An overarching awareness is needed of the social identities of the researcher and the interviewees (Kendall 2008:137). This is especially valid in this context, as Kaupapa Māori methodologies require an explicit analytical process.

Specific strategies, skills and qualities for this research context had to be investigated. Referring specifically to qualitative research, Kendall states that researchers need to develop a special set of interpersonal skills (Kendall 2008:134), all of which are relevant here. They include:

- Being aware of the danger of assuming the knowledge or opinions of the participants;
- Being able to probe without influencing responses;
- Knowing when and when not to probe;
- Not being judgmental;
- Balancing empathy and understanding with the “need to retain a critical and analytical attitude”;

- Knowing the form and rules of interaction and how meaning is constructed (Kendall 2008:135-136).

Stewart, Shamdasani & Rook (2007) identified important traits and knowledge for good qualitative researchers. Stewart et al argue that these traits are something people have in real life and don't just "start when someone sits in the moderator's chair" (2007:79). This aligns with Kendall's previous point about the need for a "special set of interpersonal skills" (Kendall 2008:134).

Using Stewart et al's list as a starting point, key traits and knowledge of researchers working in Māori contexts have been developed (Table 4). It must be emphasised that this is not a prescriptive and finite list. There is still a need to develop research protocols for non-Māori working in Māori contexts. Caution is also needed in assuming that Māori researchers have all the skills and knowledge simply because they are Māori. As, Te Awekotuku acknowledged very early on in the literature on Māori research ethics, that inter-tribal differences and histories can be "alienating, just as those between Māori and *tauiwi* can be" (Te Awekotuku 1991:15).

The non-Māori researcher working in Māori contexts is required to have special interpersonal skills specific to the Aotearoa/New Zealand context, e.g., being bicultural and bilingual (Stokes 1985:9); having an intimate knowledge of both Māori and non-Māori cultures and societies and how they interact; and a sound knowledge of New Zealand history from both Pākehā and Māori perspectives; knowledge of the Māori world view and of *mātauranga Māori* (Māori knowledge); and experience in many different Māori contexts.

There are other qualities non-Māori researchers need to demonstrate. They include respect, discretion, humbleness, long-term commitment, being seen "out the back" and close, long-term relationships with mentors, elders, colleagues, friends and *whānau* or a network of relationships (Cram 1997).

Table 4: Key personal traits of focus group researchers

Personal traits of good qualitative researchers/moderators (from Stewart 2007)	Personal traits and knowledge for researchers working in Māori contexts
Interested in other people's lives generally	Interested in and knowledgeable of Māori people, history and culture
Expressive of their own feelings and biases to encourage honesty with the participants	Aware of their own place in Māori and wider New Zealand society
Animated and spontaneous to take advantage of stimuli in a discussion	Aware of non-verbal clues within Māori discussion modes e.g. silence, body language
Sense of humour	Knowledge of Māori humour, which may include <i>iwi</i> histories, <i>iwi</i> relationships and Māori world view
Empathetic and able to see life from another perspective	Aware of the diversity of Māori experiences in New Zealand history and society
Insightful	Insightful on how the Māori experience fits into the fabric of Aotearoa/New Zealand culture and society
Literate and articulate	Ideally literate and articulate in New Zealand English and <i>te reo Māori</i> , but an extensive Māori vocabulary to recognise <i>iwi</i> names, important ancestors, famous people, key concepts and events in history would be a minimum
Flexible and responsive to any contexts in a session	Understands Māori discussion procedures, roles and group dynamics

Initial source: Stewart et al 2007

These traits and experiences listed above in Table 4 help describe a bicultural person approved of by writers such as Cram (1997) and Stokes (1998). It is reasonable to suggest that being bicultural includes knowing what it is to be in your own culture first, and understand some of what it is to be in another, and to build relationships, knowledge and skills using this understanding.

However, Bishop goes further, and provides further insight into what being truly bicultural might involve by positing:

...In order to know what is happening with a particular cultural event or context, the researcher not only needs to participate in culturally competent terms, but also needs to participate in ways that other participants use to construct meaning. In other words, the participant need to know and participate in the sense-making processes of the culture. Just as 'cultural competency' within a context of unequal power relations is problematic, not knowing how cultural participants construct meaning of their world, that is how they know, is also highly problematic (Bishop 1996:238).

Kendall, mentioned earlier in this section, had also noted that successful researchers know the form and rules of interaction and how meaning is constructed (Kendall 2008:135-136). Therefore, bicultural non-Māori researchers must learn not only how meaning is constructed but how to interact in the construction of meaning.

He Anga Rangahau

Investigating and scrutinising the role and behaviour of successful researchers lead to an awareness that current models of research protocols do not go far enough. Tolich noted several years ago the lack of literature guiding new researchers on key ethical principles (Tolich 2002) and this is certainly still the case.

It is against this background, and the experience of the researcher, that a new framework is proposed. A Kaupapa Pākehā research model would support and complement Kaupapa Māori research. To illustrate this new model, the image and concept of the *tukutuku* is used. *Tukutuku* provides an imagery regarding the knowledge and skills to participate in Māori and non-Māori contexts. The skills, principles and protocols proposed below were used as a methodology to undertake this research.

The traditional practice of *tukutuku* is associated with the domain of Rongo. Rongo is the *Atua* of peace and harmony and is associated with the inside of the *wharenui*. *Tukutuku* normally adorn the walls of the *wharenui*.

Traditionally, *tukutuku* are woven with *kiekie* and *pingao* on to a lattice-like frame of *kakaho* and wooden slats, the wooden slats being coloured with wood stain or paint (Puketapu-Hetet 1989:32).

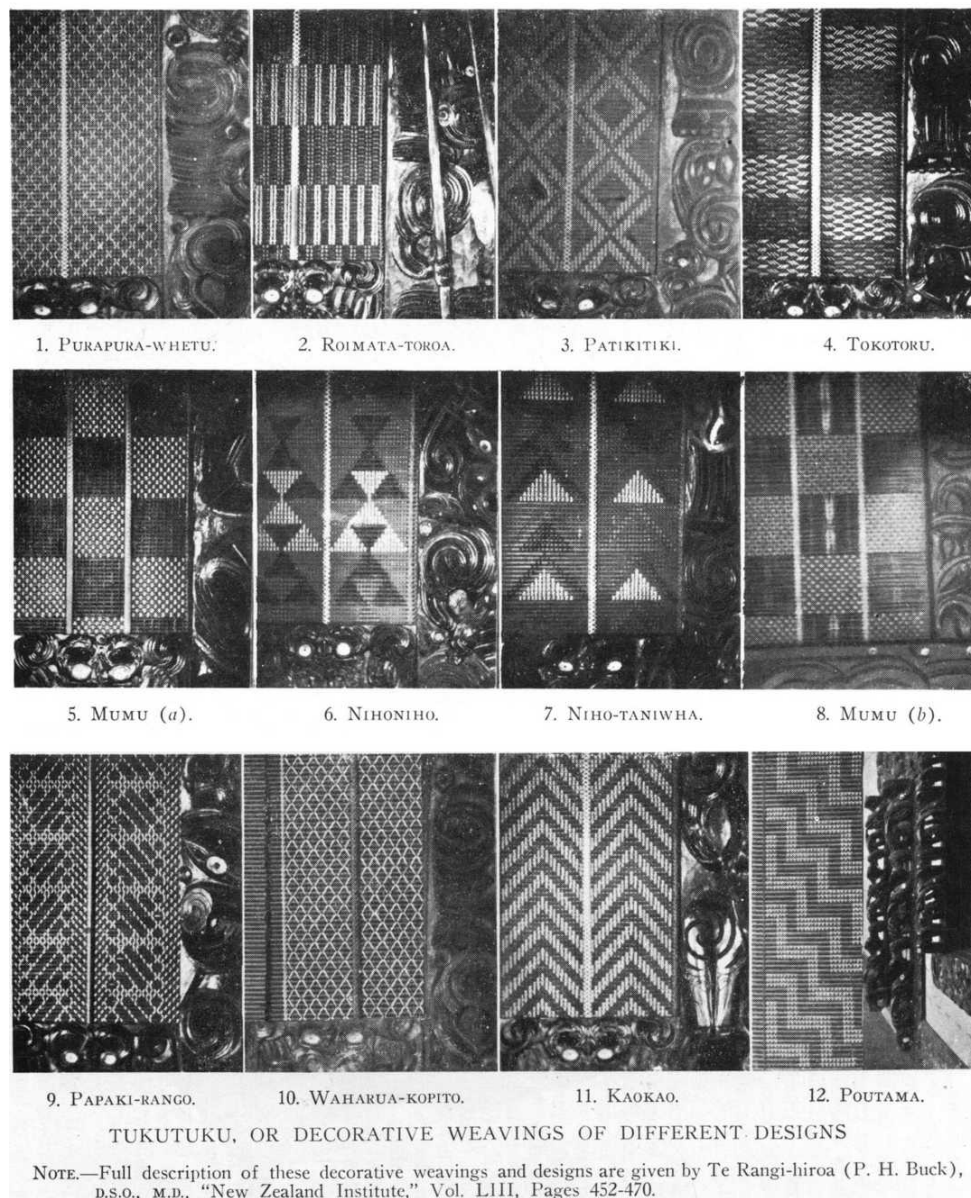
This cultural art form has been used because the practice of *tukutuku* reflects important values to achieve a quality product; thus the process is as important as the product. The values include:

- Cooperation
- Patience
- Collaboration
- Communication

The tukutuku is normally woven with a person in front setting the pattern or guiding the person at the back of the panel. Threading the kiekie or pingao through the kakaho and slats backwards and forwards from front to back is a game of patience (Puketapu-Hetet 1989:33).

The following image (Image 6) provides some examples of various *tukutuku* patterns.

Image 6: Tukutuku or Decorative Weavings of Different Designs



Source: Mitira (1972)

Tukutuku panels require one person to work the front of the panel and the other to work the back. This working relationship reflects the need for Pākehā to understand that when operating in a Māori world it is important that they work at the back.

Aunty Ngoi and Uncle Ben [Pewhairangi] taught me that when weaving a *tukutuku* panel, the back is really just as important as the front. The back still needs to be tidy and neat even though it will never be seen; the point being that the work in the front is supported by those who work at the back. It is a collaborative affair (Ka'ai: Personal Communication, 2010).

This reflects that there is huge value placed by Māori on the work that is undertaken “out the back”, in the kitchen or the rear of a *tukutuku* panel.

Image 7: Māori women from Otaki making tukutuku panels



Source: PAColl-5927-60 Alexander Turnbull Library, Wellington, New Zealand

Just as there are many different *tukutuku* patterns, there are many different variations of research methods to undertake research as Pākehā in Māori contexts. The woven strands of either *pīngao* (*Desmoschoenus spiralis* - a native plant with golden-orange), or *harakeke* (New Zealand flax, *Phormium tenax*) not only form a pattern but bind the vertical and horizontal *kākaho* (stem of *toetoe* - used for lining the walls of buildings and for making kites) together to create the complete panel. Similarly, a research project requires all components (strands) and a framework to weave together the different parts, people and topic.

The process of *tuitui* (weaving or lacing) requires the two weavers to pass the strand backwards and forwards, thus creating various patterns.

Tuitui (weaving or lacing) consists of an overlapping wrapped stitch called a **tamatakahuki** – a cross stitch and a single stitch which makes up various combination of vertical and horizontal lines (Puketapu-Hetet 1989:30).

Kaupapa Pākehā research requires the same level of collaboration between Māori and Pākehā with Pākehā almost always at the back.

All cultures evolve over time. The art of *tukutuku* is no exception to this. Traditional *tukutuku* were woven in black and white *kieke* (*Freycinetia baueriana* ssp. *banksii* - a thick native vine) and yellow *pīngao*. Over time, newer patterns have emerged and alternative materials have been introduced. This demonstrates the versatility and adaptability of Māori to embrace new technologies and new techniques. The one factor that remains unchanged is the rigour of the process and the values that underpin this. Pākehā researchers need to respect this. This discussion around a new paradigm is very much in the early initial exploratory stage. Much more discussion within the Pākehā community and with the Māori research community is needed, and it appears to be well overdue.

Three important domains are considered. Researchers would continually reflect on the domains appropriate to their own field and determine this with their research community.

Mātauranga/Knowledge

In this domain is the essential knowledge for skilled research. The researcher would need to:

- Speak *te reo Māori* and have an experiential knowledge of *tikanga Māori*;
- Recognise Māori as *tangata whenua* and the role of Pākehā within a Māori world view;
- Understand the dual, complementary roles of Māori and Pākehā under the Treaty of Waitangi;
- Understand the impact of colonialism, imperialism and power imbalances on Māori and Pākehā and actively not perpetuate those power imbalances;
- Recognise and contribute to an expertise rooted in Aotearoa/New Zealand as a country of the South Pacific.

Pūkenga/Skills

This domain refers to the skills needed by researchers within Māori contexts. Skilled researchers need to:

- Listen;
- Use Māori research practices as defined by Māori;
- Prioritise Māori needs, aspirations and decisions;
- Navigate the conflicts and tensions between academic practices and *tikanga Māori*;
- Participate and contribute through Māori communication practices and processes, which is linked closely to knowledge of *tikanga Māori*;
- Recognise when **not** to be involved, e.g. research on complex subjects like *mana*, *tapu*, *moko* (Māori tattooing designs on the face or body), *iwi* histories or sensitive subjects like sexual abuse and Māori mental health.

Reo/Communication

This domain emphasises that effective communication between researchers, participants and community is critical. As with the collaborative process between two weavers in creating *tukutuku* panels, communication ensures the process goes smoothly. The following practices summarise the key skills rather than provide a definitive list. The researcher:

- Uses Māori communication modes, practices and processes;
- Seeks guidance and advice from the research community;
- Understands and recognises their research role as determined by the community;
- Respects and is aware of how their research practices can impact on the role of other non-indigenous researchers;
- Respects and is open to critique, review and reflexivity about the wider issue of cross-cultural research and in particular the role and history of Pākehā in this;
- Has a wide knowledge of non-indigenous and indigenous relationships from indigenous perspectives.

Sadly, New Zealand has been slow to recognise and venerate people with such skills. More research and discussion is needed on Pākehā who have contributed to research in bicultural

and Māori contexts to explore *how* future Pākehā researchers can contribute more meaningfully in Māori research contexts and ultimately decolonise research.

Application of He Anga Rangahau to this research.

A central precept in the practice of making a *tukutuku* panel is that it requires two people, one out the back and one in the front, working in tandem, with simultaneous communication and a single purpose.

To expand further on how the *tukutuku* model is envisaged, consideration is given as to how the model was used by the researcher. In this project the ‘*tukutuku* panel’ represents the research, the ‘weavers’ are the research *whānau*, and the *tuitui*, or cross thread that binds the research together is the *mauri* of the Māori language. As will be indicated later on in Chapter 9, it is the *mauri* of the language, inherent in the relationship between teacher and learner, that is most critical in the learning of *te reo Māori*.

In every important sense, the Pākehā researcher is most definitely at the rear and the Māori language teachers, an integral part of the research *whānau*, are at the forefront. As much as she would wish it, the researcher’s ability in *te reo Māori* does not make her suitable to teach Māori. However, as with creating a *tukutuku* panel, there is a real role of supporting Māori language teachers, so that their teaching best enables the L2 learning of their students. It is the Māori language teachers who at the fore in a range of contexts. For example, being in front of their community within their institution, the wider Māori community and, in front of their colleagues, thus ensuring the integrity and academic rigour of the Māori language and *te mana o te reo*.

There are limits as to how far Pākehā can take leadership in this. Leadership in Māori language by Pākehā, is restricted to only a very few. In the opinion of the researcher, our role is to listen and support *te reo Māori* speaking communities. This often means being out the back, out of sight and not distracting attention away from the *kaupapa* (topic), that is the retention and revitalisation of the Māori language.

Some of the domains mentioned earlier were used by the researcher to conduct this research. There is no claim that the researcher’s own use of them was exemplary. At this stage they are an ideal to aspire to. Previous researchers like Evelyn Stokes, John Moorfield and Richard

Nunns could be considered models of that ideal. As stated, different research contexts would require different application of different skills. This is discussed here in a reflective manner to further develop the researcher's understandings of her own practice and the development of the new research model.

What is most evident is the interconnectedness of the three domains, *Mātauranga*/Knowledge, *Pūkenga*/Skills and *Reo*/Communication. They have guided and informed the researcher's approach to the research topic, along with guidance also from the research *whānau*. In the opinion of the researcher, truly reflexive practice would mean that only the research *whānau* would be able to determine if in fact the research process reflects these ideals and is well worth consideration at the end of the research process. There is a reluctance to predetermine how successful the researcher was in using her skills knowledge and communication strategies without agreement from the research *whānau*.

Working in a *kaupapa Māori* environment as a Pākehā researcher can be challenging and outside one's comfort zone. However, the benefits of using 'He Anga Rangahau' are enormous in terms of Pākehā contributing constructively to *te ao Māori* (the Māori world). To not contribute when you have something to offer can be seen by Māori as being *kaiponu* (covetous), particularly if Māori have given knowledge to the researcher with the expectation that you will share with others. Not to do this can result in doors possibly closing on the researcher.

Conclusion

The development of a New Zealand-based research practice should be a priority in the research community. Although this chapter has reflected mainly on research within Māori contexts, much of what is proposed would lead to a more open, inclusive research culture. Not only would it have positive outcomes for the research community by developing the capability, skills and capacity of researchers, it would contribute to the "transformation" of New Zealand society and to a greater "inter-connectedness" between New Zealand's indigenous and non-indigenous peoples. James Ritchie, noted by Smith as researcher in a *tiaki* model in his partnership with Robert Mahuta of Tainui, reflected,

The tide has turned. We face a future in which Māori people will assert their rightful place in this society, with or without non-Māori help. They are fashioning

a thoroughly modern, totally viable Māori lifestyle in which the rest of us may participate, if we wish. Between their world and the majority culture we also must fashion the bicultural world of inter-connectedness and common pathways and understandings, but we will not be successful in this until the Māori world is respected, is resourced, is in good health and strength, and is in the true state of equity (Ritchie 1992:10).

To decolonise research, Pākehā need to acknowledge the impact of research on Māori and Pākehā communities and continue to develop appropriate practices. Decolonising research would contribute to the inter-connectedness and respect of the Māori and Pākehā worlds. Ritchie's vision, and that of Aotearoa's ancestors, is one worth aiming for.

Chapter Seven

Analysis of Focus Group Discussion

The initial chapters have provided the background and research context to this research. Chapters Four described the philosophical approach and Chapters Five and Six explored the practical methods used in the research process. This chapter discusses the results of the qualitative data from the focus group discussion with the teaching team.

The teachers evaluate a range of technologies, including podcasts, online resources such as the online dictionary, the LMS, online videos and animations. All technologies considered within the literature review.

The Focus Group Discussions

As outlined previously in the methods section, the staff requested that they be able to give verbal responses as a group. Two focus group discussions were held, the first in November 2009 and the second in May 2010. The first discussion took place on a North Shore *marae* and the second within the Faculty building on campus. The results from the two sessions have been combined. Both discussions were informal and involved sharing a meal either before or after the interviews in accordance with Tikanga Māori.

No individual demographics were discussed as the team were well known to each other. The Māori world view was the only topic discussed with staff that was not in the student survey.

Coding of responses

The qualitative data included a transcript and notes made from the first interview and notes made from the second, shorter interview. Both discussions involved the same small group of staff. Although the data set was not extensive, this was an important user group. They had been using the resources over a number of years, and some of them were involved in the initial development of some of the resources. Critically, they had experienced firsthand the use of the tools by students.

Thematic analysis was used as a method for identifying, analysing and reporting patterns or themes in the data (Braun & Clarke 2006:79). It was used within the Kaupapa Māori framework outlined in Chapter Four. Braun and Clarke stress that one of the strengths of

thematic analysis is that it can be used within different theoretical frameworks (Braun & Clarke 2006:81). Therefore, the analysis was framed combining Māori themes and those used in the scrutiny of online and digital resources.

At the beginning of the survey major themes were identified and were used as headings to frame the design of the survey. They included access, usability, frequency, Māori world-view and *tikanga*. Analysis of the data set revealed related issues across and within these themes. They included staff and student experiences from the staff perspective, the difference between the use of the *Te Whanake* website and the LMS and comparing the needs of beginner and advanced learners. The coding and analysis of the data was a recursive, reiterative process (Braun & Clarke 2006:86) and subsequently three major themes were used. These were access, pedagogy and Māori world view, and *Tikanga*.

Access

Initially it was considered that access simply meant access to computers, but there were other aspects associated with it. Access is used here to mean access to, and accessibility of the resources.

All of the teachers had access to a mobile phone and an mp4 player, but there was little comment on how these might be used in their teaching. Mobile learning and teaching was not an expectation of staff. This was consistent with the student response.

Although, most of the staff had access to the Internet at home, they preferred to access the digital platform and the online resources from within the Faculty. This was in direct contrast to the students who were accessing the online resources from home.

Discussion on access revealed frustration at most levels. It began with access to computer suites. Although the numbers enrolled in the *te reo* Māori papers were large, especially at the beginner levels (these papers require students to submit oral assessments online), the teachers were restricted to having access to one computer suite, which had computers with microphone and headphones. The Provider's other computer suites did not allow the use of headphones and microphones.

The use of the Faculty's computer suite was restricted to dual boot computers as the *te reo Māori* digital platform was set up to work best on an Apple Mac. At the moment there was only one Apple Mac laboratory in The Faculty and it was not supported by the Provider's IT support department. Consequently, staff access to technical support had been restricted to one person within the Faculty whose primary role is academic and not technical support. Most of the *te reo Māori* teaching was done in the evening when access to technical support was very limited.

We need more computer labs...but we can only use the Apple Macs to be doing what we want to do (Focus Group discussion 1, December 2009).

Access issues impact significantly on staff as they only saw some students once a week. Many of these attended night class and they might not have the flexibility to access the labs outside of class time.

The teaching staff noted the difficulties that the dual boot computers created for student access into the computers:

Interviewee 3: Students have to verify their passwords through the Novell, Novell password thingy, they can only do that on the Windows operating system. But then, about 90% of the Windows operating systems are a Mac lab, iTunes doesn't work. So they use one system to verify their password and then they have to close down the computer, open it up again, learn how to use the Mac side to use the iTunes and it's really bloody confusing. So how can we make it so that it's all compatible with both systems, less clicks for them to get into the bloody podcasts and then to get in to be able to record themselves. So it's just really ...

Interviewee 4: And also those that were accessing from home, for most of the time, when they came in to do it at uni, towards the end of the semester, because they hadn't done the verifying thing their passwords had been cancelled. So it was working from home, now I can't get in here (Focus Group Interview December 2009).

This last comment might account for why students preferred to access the LMS at home, where they could avoid the complex log in system required in the Faculty's computer suite.

The provider's computer network was based on a Windows operating system (OS). However, the digital platform was developed to be used on the Mac OS. As the teachers described above, this required a separate log in to the computer and another log in to access the Provider's Novell system. The log ins were generated through the enrolment process and had to be used regularly to remain active. The extra log in required by the Apple Macs contributed to student confusion, especially for students who only had access to the resources once a week.

As noted in Chapter Five, the survey methods section, due to student absences, problems with log ins and access to the computer suite, it was some weeks into the academic semester before the students had accessed the digital platform system and by then, their usernames and passwords to access the Novel system had expired. Consequently, by the time the student had actually logged into the LMS, they had completed three separate log ins.

This meant that in weekly, three-hour teaching sessions the teachers might have to deal with a combination of enrolment, technical and access issues on top of the expectation of teaching Māori language to a class that can range from fourteen to over 60 students. It was not surprising that staff frustration with inefficient access impacted negatively on their experience of the tools. Clearly, there was a need to streamline the log in process, reduce reliance on one operating system and improve access to technical support.

Accessibility

The teachers were very aware that accessibility impacted negatively on their and their students' experience of the digital platform. Most statements from the teaching staff on this issue referred mainly to the LMS. The *Te Whanake* online resources did not require a log in.

Staff discussed this issue from two angles: student accessibility to the platform and the teacher's ability to access their students' work.

The digital platform was developed within the Provider's LMS. The aim of the *te reo Māori* digital platform was to increase access to the learning resources for the target language, reduce dependency and increase self-directed learning. For example, the podcasts were created by combining the questions from the oral exercises on the tapes with the related visual stimulus from the text books. Students were now not required to purchase the tapes as

they could access these on the digital platform through the LMS. The podcasts were also available on the *Te Whanake* online website.

Another aspect to improving accessibility was to provide a “platform” where students could submit their oral assessment activities online, which staff then could access online. These are what are referred to here as the Wimba Voice Tool (WVT). These were chosen as they could be integrated within the LMS and did not require the user to download extra software.

Discussion around the accessibility of the resources indicated that neither staff nor student accessibility was at its optimum. Overall, the teachers described student experience of the tools as confusing with reference to different aspects of the organisation of the podcasts and the WVT.

Navigation was probably the greatest cause of confusion. Currently the navigation with the LMS is not intuitive or logical.

The other thing is the number of clicks. It's confusing for the students. A lot of them don't even know you have to go to the podcast page, listen to the podcasts which will download into iTunes so you have to flick from the podcast page to the iTunes page then you gotta go back to the mahi page and click to open up WIMBA and there's just many things happening all at once and that's why a lot of students just give it up. They get *hōhā* with it. It should be easy and it's not. You have a whole lot of windows open especially on the Macs you get lost. So you are trying to deal with the operating system and then you can't figure out (Interviewee 3, Focus Group Interview December 2009).

It is clear from the length and nature of this explanation of the process, there were far too many steps involved for students accessing the podcasts. Much of this was due to poor labelling. Navigation between the podcasts and the WVT, a key aspect of the digital platform, was not clear. As one interviewee pointed out in the second discussion in May 2010, he was sure that students are not aware that the content on the WVT was the same as the podcasts.

Staff noted that there was no use of *te reo Māori* in the platform and suggested ‘Māorifying’ the platform, which might mean Māori language options could be used so that it was bilingual and created a more Māori environment. “It's got no Māori feel at all, not even a *nau mai, haere mai* type of thing” (Interviewee 3, Focus Group Interview December 2009). This would create another environment for the use of the target language.

Staff comments around the WVT noted that students were heavily reliant on teacher instruction on how to use it correctly and suggested written instructions or video tutorials be embedded within the LMS.

The aspect that contributed most to staff experience was related to how they accessed the students' oral submissions. This was caused by the need to access student work by the exercise number rather than through a student's name. Due to multiple submissions by single students of a class of 40 or more, the list could be extensive and could cause the system to crash, especially if there were other users logged in at the same time.

There was no function that allowed teachers to filter all responses from one particular student together. The staff member had to mark according to the exercise rather than the student. This caused the assessment of student work to be more time-consuming rather than less. The teachers had attempted to get around this problem by asking students' permission to use their user names and passwords. This was the only way they could see all of a student's responses all together. This situation was far from ideal.

The staff elaborated on this process:

Interviewee 3: ...we can only access their work by uploading everybody and there's no filter system. So the problem with that is sometimes you uploading up to sixty to eighty responses just for one question and the [system] crashes.

They went on:

Interviewee 4: You've got to look all, like you can [only view] one student's responses for everything, you actually have to go through everybody's, so you are wading through every name to find this one student each time. Bloody *hōhā*, it takes ages.

Interviewee 3: So yeah, need a filter system so that if, if we don't have the person's individual password so that we only get their response, we need some sort of filter so that we can type in their name and we only get their responses.

Interviewee 4: They normally have streams, we have streams for the same paper. You go into Blackboard and there's no filter for that either so even they have been broken up into streams for enrolment they are actually still under the same thingy on Blackboard.

Interviewee 3: So to mark one question you have to scree through sixty to eighty names and that's just to mark one.
(Focus Group Discussion, December 2009)

So “while it made it easier for the students and that they can access it from anywhere else, you know where they have the Internet...it's tripled, quadrupled our marking time” (Interviewee 3 Focus Group Discussion December 2009).

If the teacher was logged in as the student, they then had to log back in as a teacher to get the functionalities which were submitted into the LMS grading centre. The other critical aspect of marking was the ability to post marks and provide oral feedback to the students. There was confusion around the ability of the WVT to do this. The teachers still used a print-based marking schedule to record student marks which went into the LMS and then had to be entered in again to the SMS Arion. This is a repetitive and far from satisfactory process.

Staff made perceptive comments on how the accessibility of the resources on the LMS could be improved and they are given here to indicate where the areas of most concern were:

- renaming of files to match headings used in the textbooks;
- use of more images and icons to locate relevant files;
- improved sequencing and naming of long, unclear lists for the mp3 and mp4 files;
- clearer labelling to indicate language aspects and grammar points and the *kaupapa* and content of each podcast;
- direct links and greater compatibility between the podcasts and the WVT pages;
- new headings in the main, left hand navigation panel;
- embedding the video files on the LMS, as on the *Te Whanake* website to avoid reliance on iTunes;
- reducing the number of clicks from initial log in to podcasts and WVT i.e., improved navigation between resources and within the LMS;
- video tutorials for the WVT;
- improving teachers' ability to access students' oral responses within the WVT.

These suggestions are included in Appendix 3.

Access to and accessibility of the resources was discussed at length by the teachers. Aspects of both were critical to the staff experience of the tools. Due to a few key access and accessibility issues, the major aims of the digital platform, which were to streamline and increase accessibility to the language, and to integrate and expand the ability to submit and assess student work online, had not been achieved to the degree hoped for.

Ako

The following theme investigates what pedagogical use was being made of the digital tools. The discussion revealed which tools the teachers were using and which they were not using and critically, why not. Comments related to these issues were in both focus group discussions and provided an opportunity to observe teachers responding to change as well as creating it.

The teachers take their role as L2 teachers of New Zealand's indigenous language extremely seriously (this is discussed further in the next section). The discussion showed that they understood the responsibility placed on them and they realised the pedagogical demands that the digital platform and the online tools required of them. The teachers were aware that they had not had adequate training or professional development. They noted a lack of "formal training" and one participant felt there was still a need for continued training: "We definitely need more specialised training" (Interview 3, Focus Group Discussion December 2009). They recognised the difficulties in training their students and it was highly likely that the lack of professional development for the staff had contributed to difficulties in transferring these to their students.

Researchers in the area of educational technology are very clear about what teachers need to know:

...language educators who are interested in using technology have in essence dramatically changed their role from a developer of content and tools to a designer of a pedagogical environment. As designers, they still need to have knowledge of the technology but the nature of the knowledge changes from technical to pedagogical. What they need to know is not how technology works but what affordances and constraints it may have and in what way it can facilitate language learning (Zhao 2005:454).

This awareness was revealed in this short section towards the end of the first focus group discussion:

Interviewee 3: So one of things, one of the things with the digital platform was that the aims and the objectives was not just about learning *te reo*, but also making our students digital savvy. What they didn't take into account was that they've added to our workload by adding that extra objective and we can't meet, we definitely can't meet making, some of them are sweet because they are doing CAPS and those things but...

Interviewee 1: Because we are new and trail-blazing this, you know we are trail-blazers, we didn't foresee that along with being technically savvy came a whole bunch of, a whole new lot of okay responsibility in terms of managing that, that wasn't taken into consideration and you don't, we couldn't foresee it until you actually start doing it then you realise the amount of work that is put into to keep digitally, our students digitally savvy
(Focus Group Discussion, December 2009).

The teachers were aware of the expectation to make the transformation from “designers of content to designers of pedagogical knowledge” (Zhao 2005:454), but were not necessarily aware of how to make this transformation. They recognised that it was important for them to be “digitally savvy”; or if not, to at least have skills that allowed them to take advantage of their students’ “digital capital”⁵ rather than to restrict it.

This research indicated that while the teachers placed a high value on the quality and relevance of the tools, their use of them in class time was extremely limited. They viewed them as resources that students used outside of class time, during independent study. They were assessing the quality of the resources rather than the use of them within a teaching context.

There was a high level of satisfaction with the quality of the tools. The most valued resources on the *Te Whanake* website were the podcasts and the online dictionary. This was due to the quality of the material and that they “relate directly to what is in the textbooks” (Focus Group Discussion, December 2009).

⁵ This term was used by Steve Wheeler at a one-day symposium at AUT University on 30 September 2010. It borrows from the term “cultural capital”, described as “the different sets of linguistic and cultural competencies that individuals inherit by way of the class-located boundaries of their family” (Aronovitz and Giroux 1985:81).

The teachers valued that the podcasts provided alternative “voices” for students, especially native speakers, which they considered particularly important at the beginner level when models of correct pronunciation were critical.

The degree of access was another issue. It was noted that the podcasts on the *Te Whanake* site “are very accessible, not requiring log ins as with Blackboard” (Focus Group Discussion, November 2009) The staff also noted that the podcasts for *Te Pihinga*, *Te Māhuri* and *Te Kōhure* were only available on the *Te Whanake* website and they were not yet accessible through the LMS. The podcasts were especially valuable for the more advanced students, in *Te Pihinga* and *Te Māhuri*, and were more likely to be used in class at that level.

The following reasons were given for the high use of the *Te Aka* dictionary:

- Easily accessible;
- Constantly being updated;
- Content now includes visuals and audio;
- Content targeted at L2 learners of *te reo Māori*;
- Most valuable to beginner students.

The use of the pictures and the sounds is an awesome feature. I’m hoping that he is gonna start bringing out synonyms and antonyms as well.

(Focus Group Discussion, December 2009)

The staff acknowledged how lucky they were to have the online dictionary and its value to all levels of learners as an index to the *Te Whanake* textbooks, “especially at the higher levels; sometimes they’ll use words and when we use the dictionary it gives a reference back to the lower level books, so it’s really good like that” (Focus Group December 2009).

The other resources such as *Te Whanake* TV, the Animations, *Tōku Reo* and the Forum were not used in their teaching at all and this is due to the pressure of lack of teaching time with their students. Referring particularly to *Te Whanake* TV, Interviewee 1 noted

We don’t use them specifically for teaching, but we encourage the students to look at them and to view them in their own time...one of the reasons for this [not using

them in class] is that our time is precious in the class and we have to weigh up what we watch and how much time it takes (Focus Group Discussion November 2009).

Most of the team encouraged the use of the tools, other than the podcasts and dictionary, as tools for “self-directed learning activities”.

The staff ranked what were the most beneficial resources on the *Te Whanake* website for their students. In order they were:


1. Podcasts and the streamed videos
2. Māori dictionary
3. Animations and the activities.

They then identified what particular learning aspects were most helpful in those three resources. The learning aspects included: pronunciation, vocabulary, sentence structure, *tikanga*, listening, reading and idioms (see Table 5, page 84).

A distinction was made between what they felt were beneficial for the beginner and the advanced levels. The beginner level included pronunciation, vocabulary and sentence structure, and the four skills of speaking, listening, reading and writing. But then as students increased their ability in the language, the *tikanga* and idiom aspects became more beneficial and important. This would indicate that Moorfield’s intention in the two advanced texts *Te Māhuri* and *Te Kōhure*, to include more medium-orientated language had been achieved, and the teachers viewed this as entirely appropriate.

Teachers then ranked the effectiveness of each of the tools in relationship to certain language learning aspects. These are shown in Table 5.

Table 5: Teachers' group rankings of the effectiveness of the Te Whanake Online and the LMS

12. Please discuss and then rate how effective each resource on **Te Whanake** is, in terms of key language activities and features
 0 = Not at all  5 = Excellent

Tools		Language Features								
		Pronunciation	Sentence Structure	Vocabulary	Reading Comprehension	Listening Comprehension	Idioms and Colloquialisms	Speaking	Non-verbal language e.g., body language	COMMENTS
Te Whanake	1. Podcasts									
	MP4				5					Only valid for <i>Te Kākano</i> and <i>Te Pihinga</i>
	MP3									
	Video	5	5	5		5		5	5	
	2. Animations & Activities	4	4	4	4	4	4	4	4	
	3. Online Maori Dictionary		3-4	5			5			
	4. Tōku Reo activities	Don't use								
	5. Forums	Don't use								

Please discuss and then rate how effective each resource in **LMS** is, in terms of key language activities and features

0 = Not at all  5 = Excellent

Tools		Language Features continued								
		Pronunciation	Sentence Structure	Vocabulary	Reading Comprehension	Listening Comprehension	Idioms and Colloquialisms	Speaking	Non-verbal language e.g, body language	Comments
Blackboard LMS	Wimba voice tools	4-5						4-5		
	Podcasts	4-5				4-5	4-5	4-5	Only for higher levels 4-5	
	iTunes									Using iTunes an issue as the visuals can only be seen with iTunes – see comments for podcasts

One teacher commented particularly on the mp4 or video files of the podcasts:

I think at the lower levels the mp4s, as I said before, the *kupu* are coming up on the screen so it's helpful for the student, so they can see the word on the screen and then actually hear how it's pronounced because sometimes they can't actually figure out how to pronounce the [word].

(Interviewee 4 Focus Group Discussion, December 2009)

Although the teachers placed a high value on the benefits and content of the online *Te Whanake* resources, their use of them as teaching resources was restricted to the podcasts and dictionary and these were more often only with the advanced levels. Essentially the tools were seen as resources that students accessed outside of class time. Reasons for this included the pressure on time, access to computers and the imperatives of a fixed timetable.

It could also be attributed to the notion that while the staff knew how to access the tools online and saw the benefits of them, they were not aware of their “affordances” or pedagogical benefits. An affordance is an action that an individual can potentially perform in their environment by using a particular tool (McLoughlin & Lee 2008:11). For example, the animations on the *Te Whanake* website present a number of language learning affordances, such as role-playing and interacting and creating dialogue.

It is not unusual for teachers to place a high value on the content of a resource and seeing its potential for students, without being aware of how best to use it in a classroom context. Observers of educational technology note that merely knowing how to use a digital resource is not the same as knowing how to use it as an educational tool (McLoughlin & Lee 2008, Hampel & Stickler 2005). Making the shift from “using ICT as ‘instructional tools’” to enhance conventional teaching, to using ICT as “cognitive tools requires major shifts in a teacher’s approach to their craft” (Gao, Choy, Wong & Wu 2009:715).

The development of digital language tools within the LMS has been a significant project for the Faculty, and this is in line with contemporary developments in educational technology. The combination of new innovative formats and quality, previously-trialled, proven content, is in some regards, very successful. It has significantly reduced costs for students and increased access to most resources and is noted as a point of difference in the delivery of *te reo Māori* to L2 learners in the Faculty.

Current thinking on the successful application of educational technology requires the following elements:

- It must meet a pedagogical need as opposed to just a technological need (Gao, Choy, Wong & Wu 2009);
- A focus on *use* not just on development (Zhao 2005);
- An awareness of what affordances the tools offers (McLaughlin & Lee 2008).

In order for the optimum use of any digital learning tool, all aspects of its development, design, placement and use need to be understood at a complex level.

An ongoing challenge and opportunity for education researchers and practitioners is to apply new technologies as a means toward improved learning outcomes rather than an end in and of itself; that is to take a pedagogically-disciplined approach to teaching and learning innovation (Brill & Park 2009:70).

In the opinion of the researcher, the degree of frustration and the type of difficulties experienced by the teachers indicate that the development of the digital platform has not included a pedagogically-driven approach. The reality of this has been carried by the staff, as they deal with demands of guiding and encouraging student use, increased technical expectations and time-consuming access issues. Greater time and attention is needed for preparing staff for the role that digital resources can have in their classroom, the changing expectations of today's students, and the unique requirements of teaching Māori language in a social context.

Tikanga

The final theme used in the analysis process was *tikanga*. This was an interesting and lively part of the discussion and illustrated how they viewed their role and how this was very much a part of their teaching practice. The language teachers viewed *tikanga* as an inherent, essential and critical part of their teaching. But the consensus amongst the teachers was that this was something that could only be done be taught in person; a resource could only support the role of the language teacher rather than replace or substitute it.

Interview 3: ...but the other side to that is that you shouldn't be learning *tikanga* from a book. You have to be experiencing it, living it,

learning it all in one. So, I don't think it should be explicitly the teacher's role to teach *tikanga*...

Interview 1: ...or explicitly in books so there needs to be a balance, a flow, a balance between *kaiako* and what they are able to study, to research at home, um in the books. Yeah, I agree with interviewee 3 that it should be and that's why we fight tooth and nail for the *wānanga* because *tikanga* is not supposed to be in the four walls of the class room, it's learnt outside the four walls of the class room, simple things like cleaning dishes, washing dishes and things like that.
(Focus Group Discussion, December 2009)

Wānanga in this context refers to a residential immersion programme, often situated on a *marae*. They are a unique component of language teaching in the Faculty and are one context where pedagogy and *tikanga* intersect. In this context, the idea is to create *Māori* immersion situation for L2 learners and to create a context that is governed by *tikanga* Māori. Sometimes this is done by staying at the provider's *marae*, or by taking the students to *marae* in another part of the country. Students experience *tikanga* first-hand through taking part in *pōwhiri* (welcome ceremony) and being hosted on the *marae*. The language teachers considered *wānanga* the place where *tikanga* was experienced and lived, rather than being a concept from a book, as indicated in the comments above by Interviewee 1 and 3.

Wānanga also revealed those students who had knowledge of *tikanga*. The teachers recognised their role in developing this:

Interviewee 3: And it was like that's a reflection on us because we are responsible, we are the guardians of these people in terms of their learning and the teaching. At some point they have to take responsibility for that but we are the initiators of that and that's a huge responsibility on us.

Interviewee 1: And that's not in the book. That is not in the book whereby okay what happens that's not in the teacher's manual so we as *kaiako* have to understand that and its okay we have to weigh this up, um, how we deal with it is common sense and...

Interviewee 3: Common sense and there's no compromise, you don't compromise your *tikanga*
(Focus Group Discussion, December 2009).

Learning Māori language had two components: the learning of the language and the *tikanga* embedded in the language. This was an expectation of Māori language teachers that might

differ from teachers of other languages. How this was supported and reflected in the resources is a critical aspect of resource development.

Interviewee 2 had strong opinions on this topic. Most heads were nodding during this response:

I don't think it's the right approach because the textbook, the iPod or whatever at the end of the day is a resource and I totally agree because it's something that is lived and should be taught outside the classroom and so is the *reo* and the *reo*, I mean the textbook for the *reo* is not the be-all and end, it's just the resource and so if you look at it as a resource then culture and protocol and all that, I have no problem with it to be in the textbook because it's just the textbook at the end of the day, it's up to the teacher to be able to elucidate it and make sense of that and understand that, just like the *reo*.

Just like the different sections, like in *Te Kāhano* there is a section on *tangihanga* which is a big *kaupapa*. But at the end of the day it's just a couple of passages, a couple of pages, in a book. It's up to the *kaiako*, like what we did at Waihi to being able to elucidate it; you know the culture becomes a living thing when you take it out of the textbook and so on. I have no problem with being anything in any resource, in a book it's just a resource. I don't think it's the right approach

(Focus Group Discussion, December 2009).

The consensus from the discussion was that while the resources are important, it was the role of the teacher that was most critical with regard to how *tikanga* was included and taken from a “concept to practice” (Interviewee 3, Focus Group Discussion December 2009).

There was an interesting brief reflection on the relationship between *tikanga*, the language and the teacher:

Interviewee 3: Is there an assumption that *kaiako* Māori know? Just because we can *kōrero te reo* it's an assumption that we know *and* know the practices of ...

Interviewee 2: That would be no. That's incorrect.

Interviewee 4: The assumption is definitely there though.

Interviewee 3: So we fall back on what we've been taught and what we've seen, formally/informally to create an answer for students who don't follow properly, who have a good command of the *reo*

(Focus Group Discussion, December 2009).

The staff felt that although *tikanga* was not something you could learn out of a book, the portrayal of *tikanga* within any resource was important. It was noted that the degree of

instruction was restrained in the books and there seemed to be approval of this approach. The staff considered this in light of the writer of the materials being Pākehā:

Interviewee 3: Yeah. He's ...deliberately didn't include much *tikanga*. So it's, I'm assuming [hard to hear] because he's Pākehā he didn't feel that it was his role to be possibly, to have *tikanga* in there and that it should be [mumbling] left up to *kaiako*.

Interviewee 2: We didn't ask him why that was.

Interviewee 3: It would be interesting to actually talk to John.
(Focus Group Discussion, December 2009)

Moorfield has considered the inclusion of *tikanga* in his books. He says:

My intention was to leave much of that to the teacher so that teachers in a particular tribal area would be able to implement *tikanga* specific to the area. Increasing amounts of cultural knowledge are included in the more advanced textbooks of the series where the language can be used to discuss these cultural aspects. For example, concepts of *mauri*, *tapu*, *whaikōrero*, spiritual beliefs, humour, *waiata* and *haka* and cultural norms reflected in *whakataukī*, *whakataukā* and *pepeha* (Moorfield, Personal Communication, August 2010).

The Māori World View

One of the interviewees remarked that LMS tools needed “Māorifying” (Interviewee 3). The question was how a two-dimensional, textual world could represent a Māori context. Apart from the obvious lack of Māori language within the LMS, there were other aspects to it. This section attempts to explore some of those issues.

Tikanga, the Māori language and the reflection of a Māori world view are inextricably linked. But, “*te reo Māori* is the link between knowledge and meaning, teacher and student”. It is the “strand that links concepts through time and through each other” (Ka'ai et al 2004:13).

The digital platform based within the LMS has been described as part of a “nexus between the past, present and future” (Apple 2008). Clearly, if the language is intrinsic in how a Māori world view is conveyed, providing quality, authentic language resources must prioritise this. Māori language teachers need to have confidence in the resource's cultural integrity, as the link between the traditional and contemporary Māori life, their world and that of their students.

The teachers emphasised that a major part of the value of the podcasts for the more advanced texts, within the LMS and *Te Whanake*, was the use of archival material from programmes like *Waka Huia*. It links learners to traditional knowledge and models of native speakers. The extent to which learners could access this kind of knowledge online had been limited. Editions of programmes like TVNZ's *Waka Huia* are now "on demand" and websites like NZ On Screen Trust's website, nzonscreen.com, have increased access to hard-to-find archival material. Much material had until very recently been difficult to access, if in fact people even knew that it existed.

The initial motivation for the development of the *Te Whanake* series was a response to the lack of language learning materials available and access to examples and language contexts. Moorfield's work was part of a wider expansion in the range of *te reo Māori* L2 materials, which now includes print, digital, online and mobile resources.

In the focus group discussions, only the podcasts and the animations from *Te Whanake* were viewed in respect to the Māori world view. As neither *Te Whanake TV* nor the Forums were used in their teaching, they were not familiar with the content. The teachers of the intermediate and advanced papers acknowledged that "it gets harder to teach the higher levels" (Interviewee 1, Focus Group Discussion December 2009), so the resources and the content become more important as students progressed from beginner to more advanced learners. The teachers valued the ease with which these resources could be accessed and that, for the beginner podcasts at least, they could be accessed on both *Te Whanake* Online and the LMS.

The teachers made a distinction between the podcasts and the animations. They noted that the podcasts for *Te Kōhure* and *Te Māhuri* used archival material so they reflected more traditional cultural topics such as *tapu*, *mauri* (life principle, special nature), *rongoā Māori* (remedy, medicine), tribal histories and the Māori calendar, among others. In contrast, the Animations focus more on contemporary urban Māori life. The range of contexts includes: being at home, going to parties, going to the movies, a *kapa haka* competition, being on a farm, being at university, playing sport, shopping and so on. They felt that this was a real benefit of the Animations, but would like to see more traditional knowledge included in this format. (Focus Group Discussion, May 2010).

Image 8: The characters from the *Te Whanake* animations: Left to right: Hererīpene, Mīria, Eruera, Tarati, Wiremu and little Neihana



Characterisations within the animations were an important aspect of the discussion. The teachers described the characters as “familiar” and “authentic” and they felt that the relationships between the members of the family were appropriate, e.g. the relationship between the grandmother and her grandchild (Focus Group Discussion May 2010). Discussion on this particular aspect was not expanded on by the participants, which was taken to mean that generally the overall impression was favourable towards this aspect of the animations. It was noted that there was little information on the site about the characters but that further use of them as a learning resource on the Animations website could develop greater use of them within learning contexts.

The online dictionary *Te Aka* was described positively as an “insight into *te Ao Māori*” (Focus Group Discussion, 1 December 2009). This is a highly complementary description and could be used to indicate the success of the quality of the dictionary’s content.

Conclusion

The key findings from the focus group discussions were:

- The staff placed a high value on the quality and accessibility of the digital resources and their direct relevance to the *Te Whanake* teaching series;
- The tools were seen mainly as a self-directed learning (SDL) resource;
- The resources were viewed differently depending on the students’ level;
- The teachers viewed the role of *tikanga* in the teaching and learning of *te reo Māori* as critical. Although considered an important element of the books, its transmission and

implementation were seen as the role of the teacher and therefore relied heavily on the knowledge of the teacher.

The two focus group discussions revealed that computer access was unnecessarily complicated and impacted negatively on the teachers' experience of the digital and online tools. There was room for improvement in the management of student access to computers. The emphasis on one operating system was not consistent with the rest of the provider, and was not helpful to teachers and reduced technical support. Students who did not log in regularly to the intranet system found that their user name and passwords would have expired. Students were restricted to one computer suite as it was the only one with microphones. Attention to these fundamental aspects would improve teacher and student experience and make greater use of a rich set of under-utilised resources.

Chapter Eight

Analysis of Student Survey

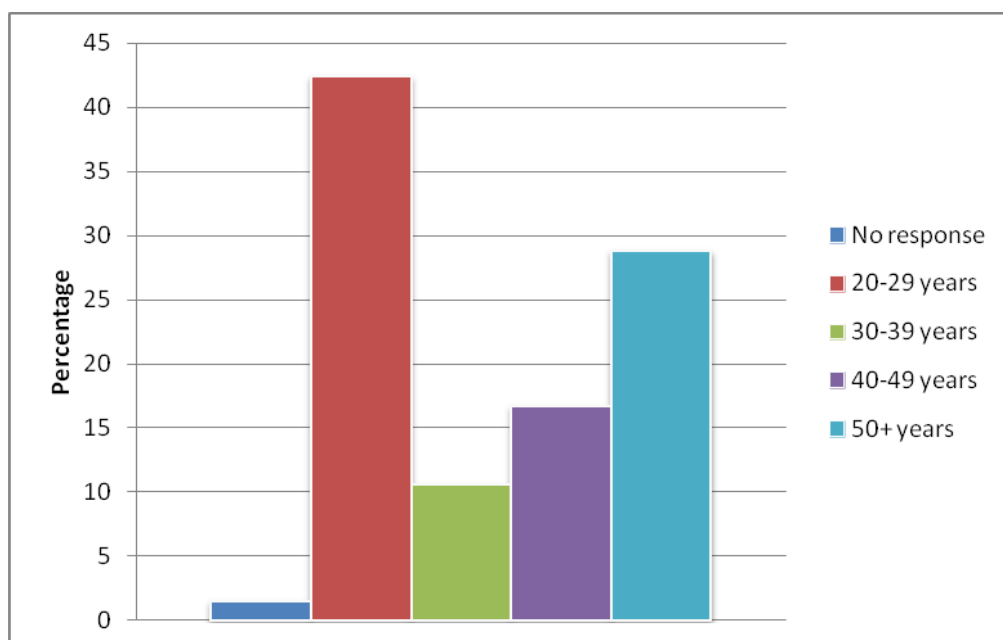
This chapter discusses the results of the quantitative survey. The first section looks at student demographics and the second section looks at the participants' use of the tools. The survey revealed two major groups of students and high rates of access to technologies, but varied use of the online resources. The response rate to the survey was exactly 50% of the total 132 students enrolled in Māori language papers. The data of all of the following graphs and tables is from the quantitative survey unless specified as relating to another source.

Demographic Profile of Students

Age

The first part of the survey provided a description of the student group learning *te reo Māori* as a second language (L2). The largest group of students were between 20 and 29 years of age (42%) as shown in Graph 3. It was assumed that with 45.5% of the students were over 40 years of age, this would have implications for older users of digital resources. However, the survey results did not support this. This positive result is discussed later on in the chapter.

Graph 3: Age range of survey participants



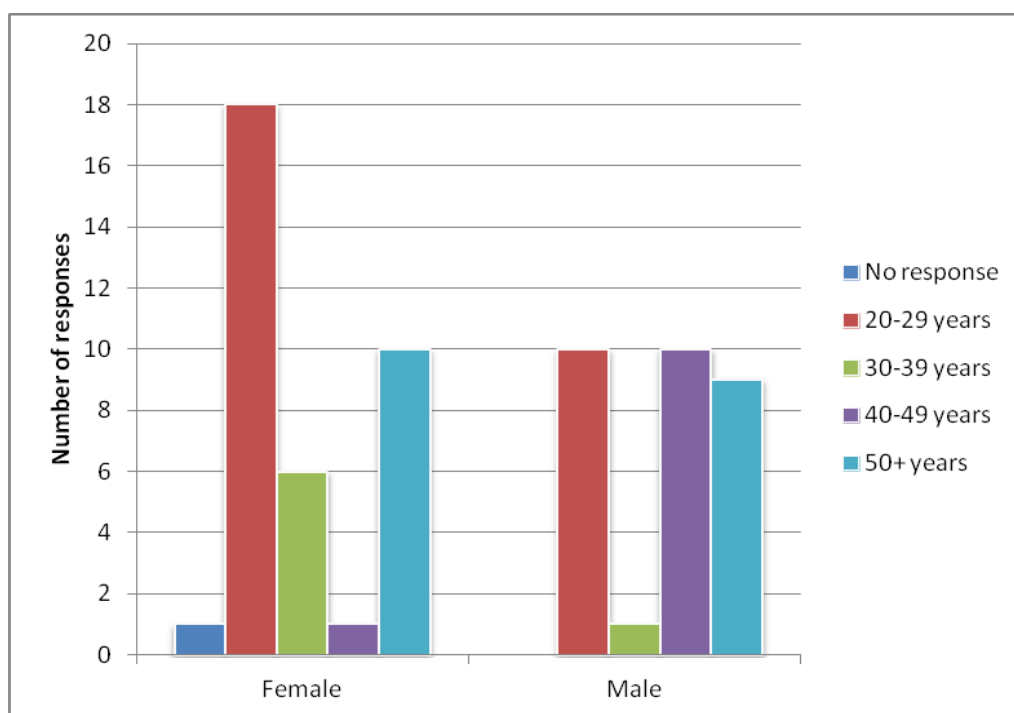
Gender

There was not a huge disparity between gender, with 54% female and 45% male. (Only one respondent did not specify which gender they are.) However, if the age and gender of respondents were combined, a more interesting picture was revealed (see Graph 4).

The first point of significant interest is the high number of younger Māori women learning *te reo Maori*. Other studies of Māori language students, Bauer (2008:430) and Earle (2007:4), both noted greater numbers of women in Māori language classrooms. Women were considered the main drivers of Māori language initiatives like Māori-medium education and were more likely to be involved in intergenerational language transmission.

An interesting feature of the results was the relatively even numbers of men in three out of the four age groups, the exception being the few male students in the 30-39 year old age group, as shown in Graph 4.

Graph 4: Age and gender of students



The difference between male and females above the age of 40 was also very interesting. Bauer noted older Māori men as a group of interest and posited that this group developed a late awareness of their speaking roles on *marae* (Bauer 2008).

According to the data, the student group was made up of two types of students: younger women and older men. There are challenges in how to deliver resources to two groups with distinct language needs, i.e. younger women and their role in intergenerational language transmission and the older men who might need more formal, prescriptive ceremonial language used on the *marae*. These results supported Bauer's claim for further research on these two groups to investigate their specific language needs and to understand what was motivating them and how best to support them (Bauer 2008:43). She notes:

The burden of language revitalisation will increasingly fall on women, although it is the men who have the most opportunities to develop their reo in the dominant domain, the ceremonial aspects of the *marae* (Bauer 2008:49).

Chi Square test ($\alpha = .05$) confirmed that gender of students had a significant association with age of students (p-value <.008).

Ethnicity

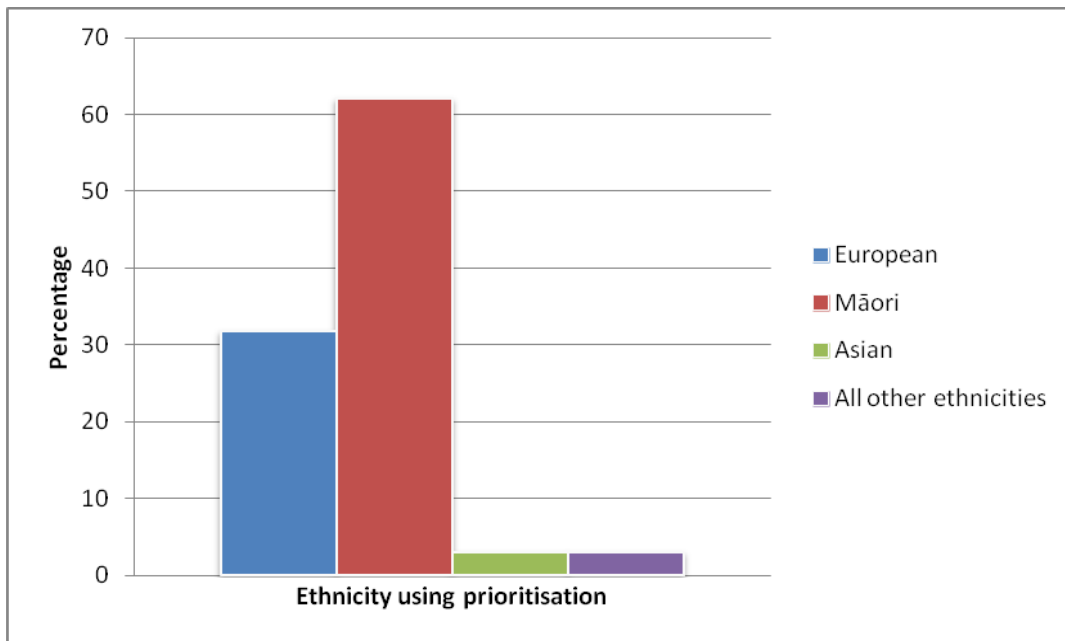
As discussed earlier in the previous chapter on research methods, two different methods were used to analyse ethnicity data. The first method, called prioritisation, ranked (or prioritised) ethnicities. Multiple responses for ethnicity were only counted once. Using this method, the total count for each ethnicity would equal the total number of respondents.

Statistics New Zealand's ranking was used to prioritise ethnicities in the following order:

1. Māori
2. Pacific
3. Asian
4. European

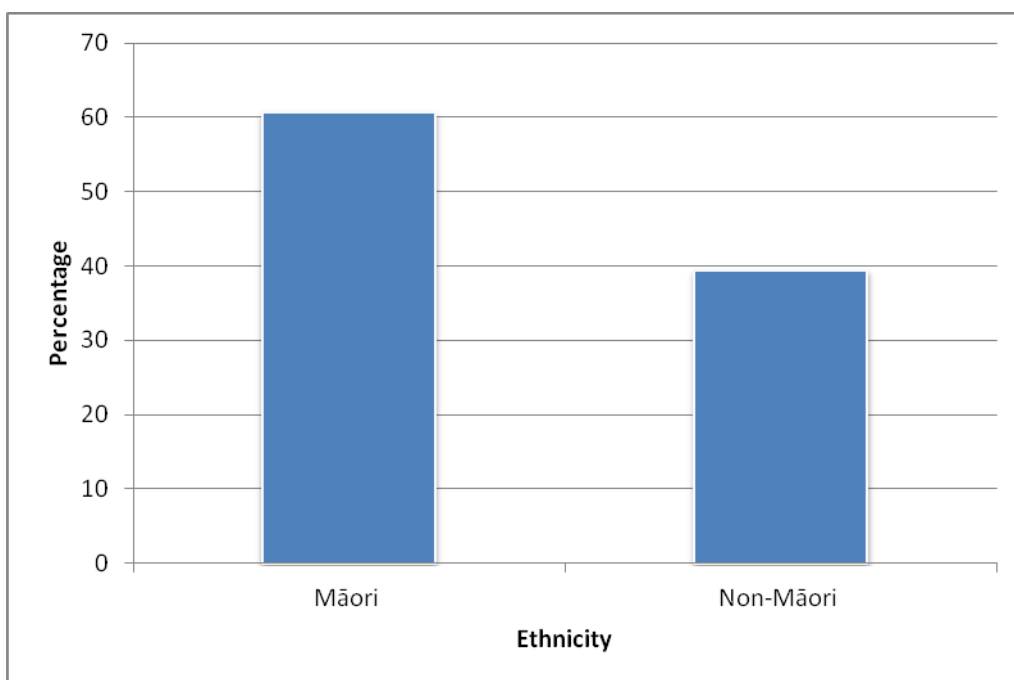
Graph 5 shows the ethnicity data using prioritisation. Pacific Island students “disappeared” using this method, as all students who identified as Pacific Island also identified as Māori, so they were counted as Māori.

Graph 5: Ethnicity of participants using prioritisation



If the prioritisation method was restricted further (see Graph 6) to just Māori and non-Māori, it showed that 60% identify as Māori and 40% as non-Māori. This data that was used for cross tabulations with other data sets later on in the chapter.

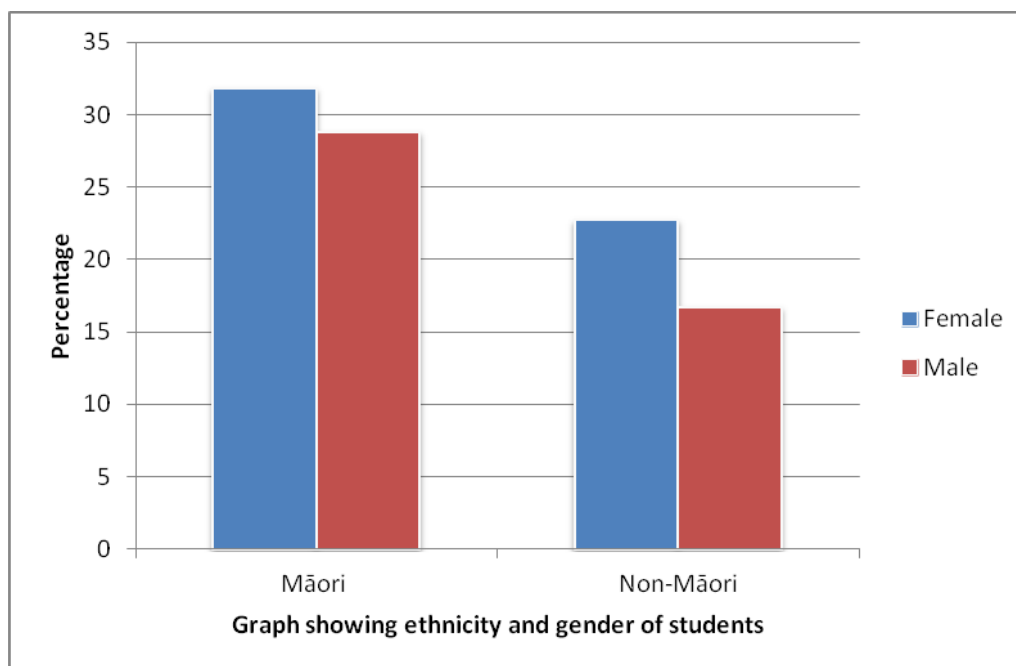
Graph 6: Māori and non-Māori Ethnicity



Ethnicity and Gender

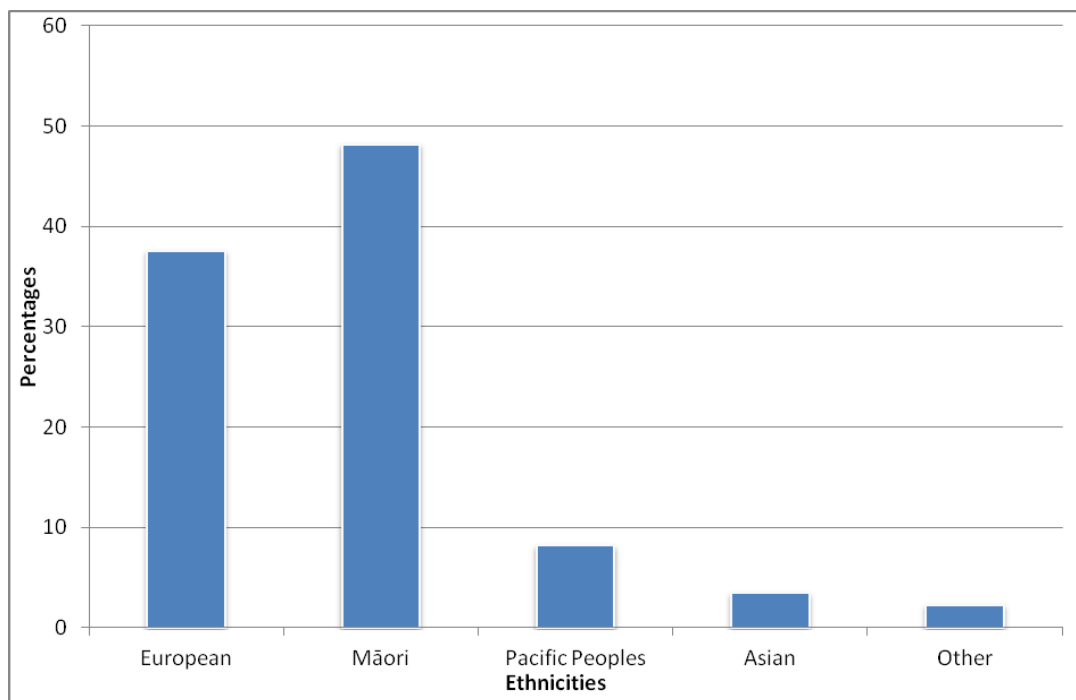
Both non-Māori and Māori had larger numbers of women students, as shown in Graph 7 below. However, the difference between the genders was smaller for Māori. Chi Square test ($\alpha = .05$) confirmed that gender of students does not have a significant association with ethnicity of students ($p\text{-value} < .679$). Whilst not statistically significant outside of this research it may be that those comments for gender discussed earlier account for the higher number of Māori men, compared with non-Māori men, taking Māori language courses.

Graph 7: Gender and ethnicity of participants



The second method for presenting ethnicity data, namely ‘total responses’, showed all responses given for ethnicity. This method showed the total number of ethnicities within the student group. Although Māori was the largest group using both methods, the difference between the number of Māori and non-Māori was greater under prioritisation than in the total responses. Total responses for ethnicity are shown in Graph 8.

Graph 8: Ethnicity of participants using total response method



Given that the target language was *te reo Māori*, these numbers were not unexpected. The large European group was interesting. The results reinforced the need for the content of the resources to reflect the world of the target language but in an authentic and contextual manner. This aspect of the resources was discussed with the staff in the focus group discussion in the previous chapter.

Further research is needed to look at the motivation of non-Māori L2 learners of *te reo Māori*. A Te Puni Kōkiri report on research on attitudes towards the Māori language claims that there is progress in the “increasingly high-levels of positive attitudes towards the Māori language amongst non-Māori” (Te Puni Kōkiri 2010:6). The proportionally large number of non-Māori learners could be part of this change in attitudes towards Māori language, but it is difficult to conclude from this research.

Iwi

Links to *iwi* through *whakapapa* is acknowledged as a critical aspect of Māori identity (Mead 2003) and that “Māori thrive on celebrating their tribal identity in the first instance and then their collective identity as Māori thereafter” (Ka‘ai et al 2004:23).

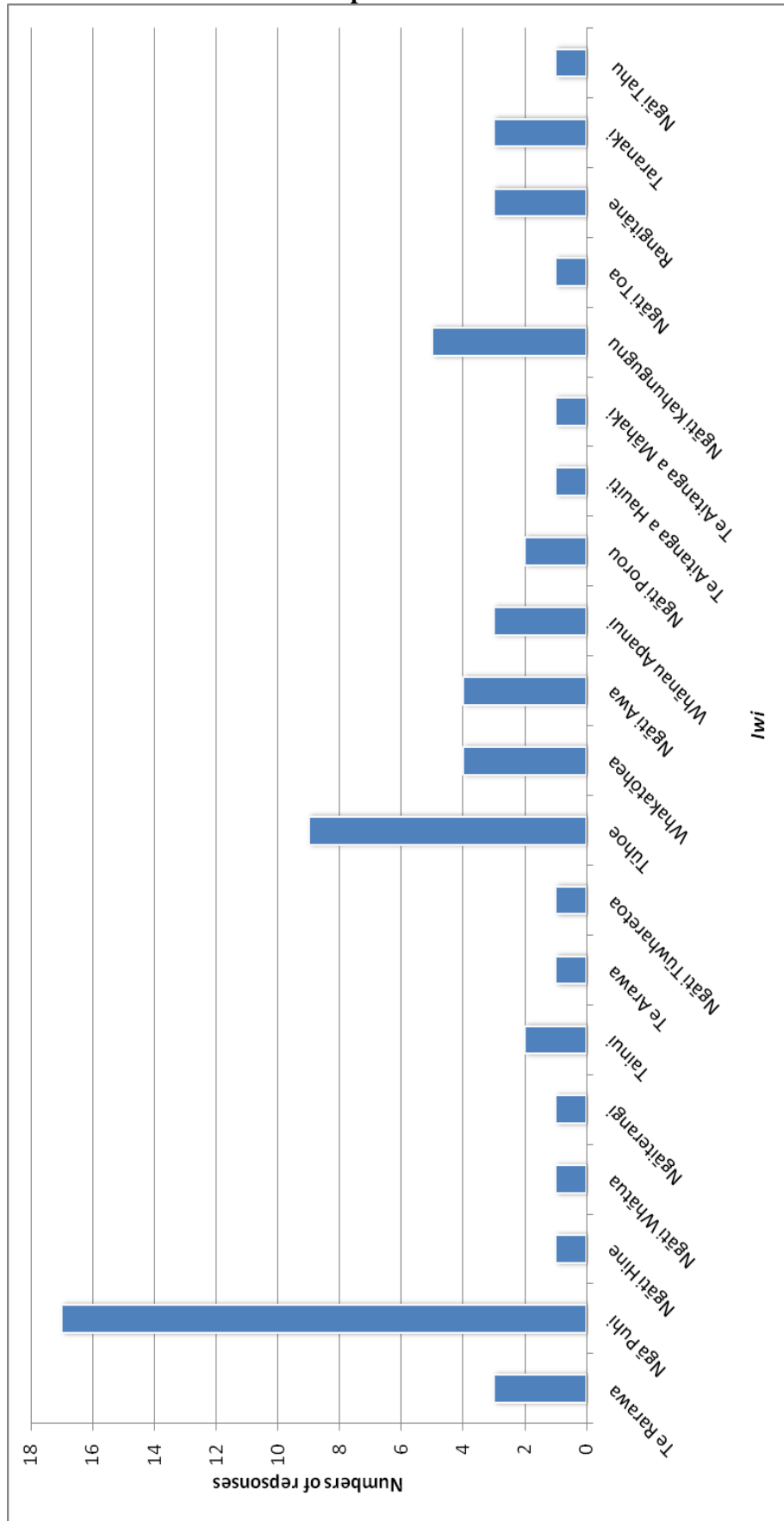
Graph 9 shows that participants affiliated with *iwi* from all over New Zealand. The largest groups were Ngā Puhī with 17 and Tūhoe with nine members. The rest were spread between 18 other *iwi* (Graph 9). That Ngā Puhī is the largest *iwi* group correlated with the 2006 Census figures (Auckland Regional Council 2007:5) which reported the following *iwi* groups from the 137,133 people who identified as Māori, or said they were of Māori descent, in Auckland:

- Ngā Puhī [50 040]
- Ngāti Porou [13 215]
- Te Rarawa [6 843]
- Tūhoe [5 685]

What was interesting about these statistics from a Māori language point of view was that neither of the two largest *iwi* groups, Ngā Puhī and Ngāti Porou, is considered *mana whenua* (territorial rights, power from the land) and their dialect was not that of *mana whenua*. This contrasted with other regions such as Tainui or Tūhoe whose majority populations would reflect the *mana whenua* and dialect of that specific region. Only one person in the survey affiliated with an *iwi* from the Auckland region.

Keegan's 1997 research found that most Māori language courses were not based on a particular dialect but he noted that "dialects were generally taught inside their tribal area" (Keegan 1997:28). At the time of his research, Ngā Puhī was providing the largest number of dialectally-based courses with 12, followed by Ngāi Tūhoe (seven) and then Tainui (six).

Graph 9: *Iwi* affiliations of those who identified as Māori



The figures in Table 6, from Te Puni Kōkiri's 2008 report on *The Health of the Māori Language in the Tāmaki-Makau-Rau 2006*, describe the number of speakers from *iwi* of the Auckland region. It did not specify if they are actually living in Auckland.

Table 6: *Te reo Māori* speakers affiliating to *ngā iwi o Tāmaki-Makau-Rau*

<i>Te Reo Māori Speakers Affiliating to ngā Iwi o Tāmaki-Makau-Rau</i>			
Iwi affiliation	Able to converse in Māori	Total	Māori Language Rate
Ngāti Whātua	4,035	14,721	27%
Te Kawerau	33	123	27%
Te Uri-o-Hau	309	1,074	29%
Te Roroa	315	1,170	27%

(Source: Te Puni Kōkiri 2008b:7)

Earle's research on *te reo Māori* in tertiary education found that there was a relationship between the number of L2 learners and existing speakers of *te reo Māori*.

The number of students enrolled in *te reo Māori* programmes is strongly related to the size of the Māori population in the region, and more strongly related to the number of Māori who speak *te reo Māori* within the region. That is, the more Māori speakers of *te reo* there are in a region, the more students are likely to be enrolled in a *te reo Māori* programme (Earle 2007:26).

However, he did not elaborate on what this meant for urban areas like Auckland. Te Puni Kōkiri's report on the *Health of the Māori Language in Tāmaki-Makau-Rau 2006* noted that the number of Māori language speakers in Auckland of 20% was slightly lower than the national average of 23% (Te Puni Kōkiri 2008b:4).

Use of a "standardised" Māori, in the *Te Whanake* series, is relevant as there are diverse *iwi* groups in the student group. But as the Faculty is located in an Auckland-based tertiary provider, it could contribute more to the revitalisation efforts of the dialects of the Auckland region as a way of strengthening its ties with *mana whenua*.

The Faculty is well placed to support the revitalisation of dialects of *iwi* groups of the Auckland region and indeed general Māori language revitalisation within Auckland's diverse

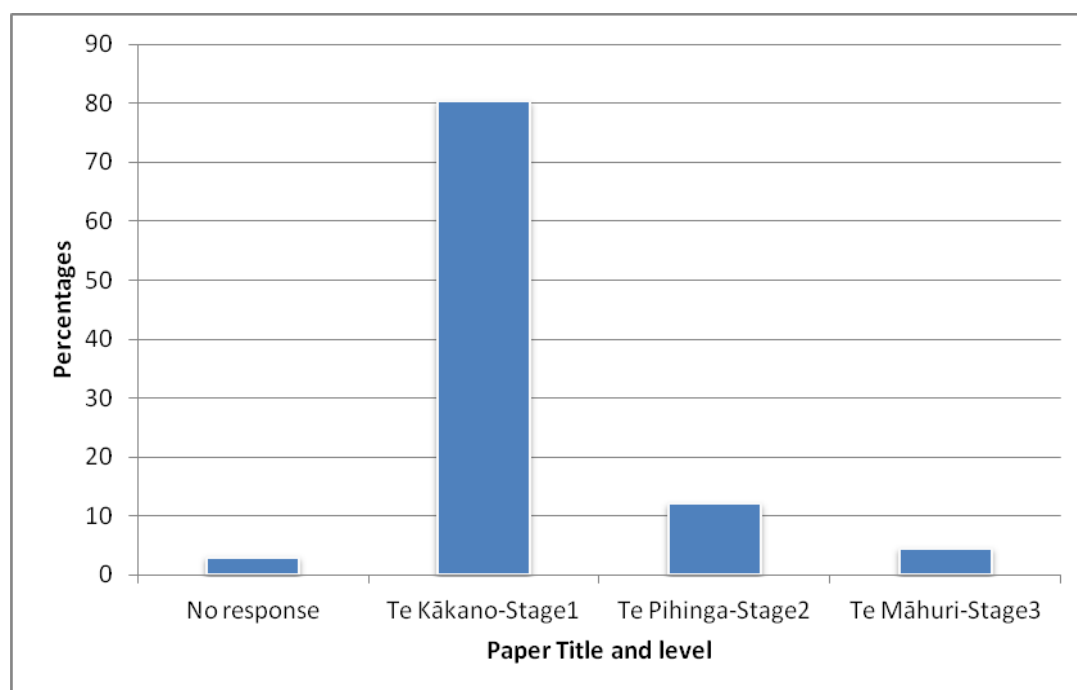
Māori community. The Auckland region is projected to have one of the greatest increases in the Māori population: up from 45,100 to 201,700 by 2021 (Te Puni Kōkiri 2010b:1).

Academic Profile of Students

Paper level

Most students who responded to the survey were in the first year, beginner-level paper, *Te Kākano*. Therefore, most of the respondents to this survey were first-time users of the resources. Students of *Te Pihinga* and *Te Māhuri*, second and third-year students respectively, would have more experience using the resources.

Graph 10: Survey participants by paper level



The number of students enrolled in *te reo Māori* papers, according to the provider's student management system (SMS) Arion, are provided in Table 7.

Both the survey (Graph 10) and the figures from the SMS Arion (Table 7) showed that students enrolled in the beginner paper, *Te Kākano* were not returning to enrol in *Te Pihinga*. Critically, there was only a very small cohort of students progressing past the beginner level to pursue higher level papers to develop proficiency in the target language.

Table 7: Numbers of students enrolled in Māori language papers

Students enrolled in Māori language papers		
Te Kākano – day class (Beginner level)	33	95
Te Kākano – night class (Beginner level)	62	
Te Pihinga (Intermediate level)	24	
Te Māhuri (Intermediate level)	13	
Total number of students	132	

(Source: Arion SMS)

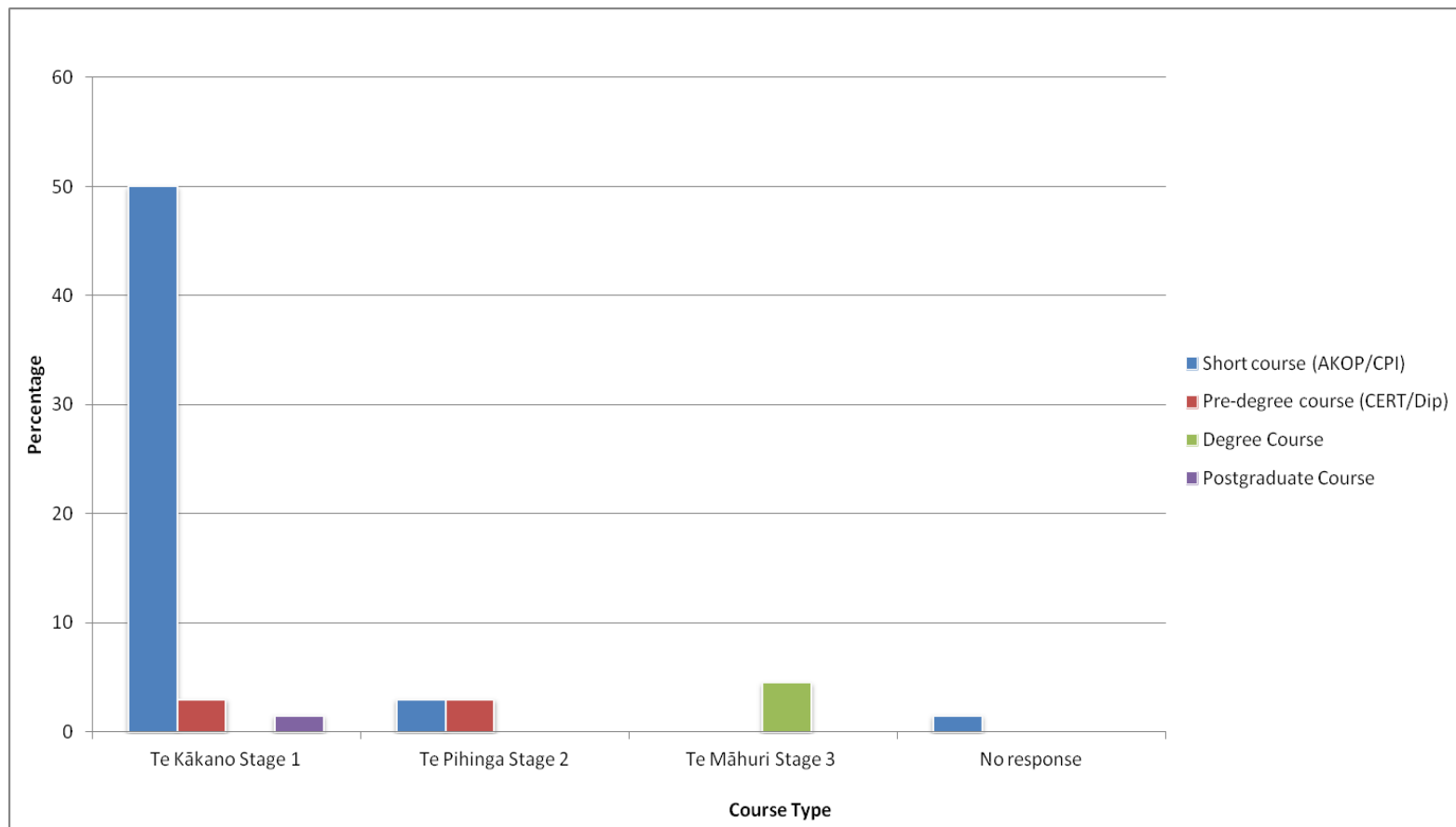
The sharp drop in students after the beginner paper might be related to course type. Most Māori language students were enrolled in a short course, which might be for a certificate or for personal interest and did not enrol in the degree.

Course Type and Paper Level

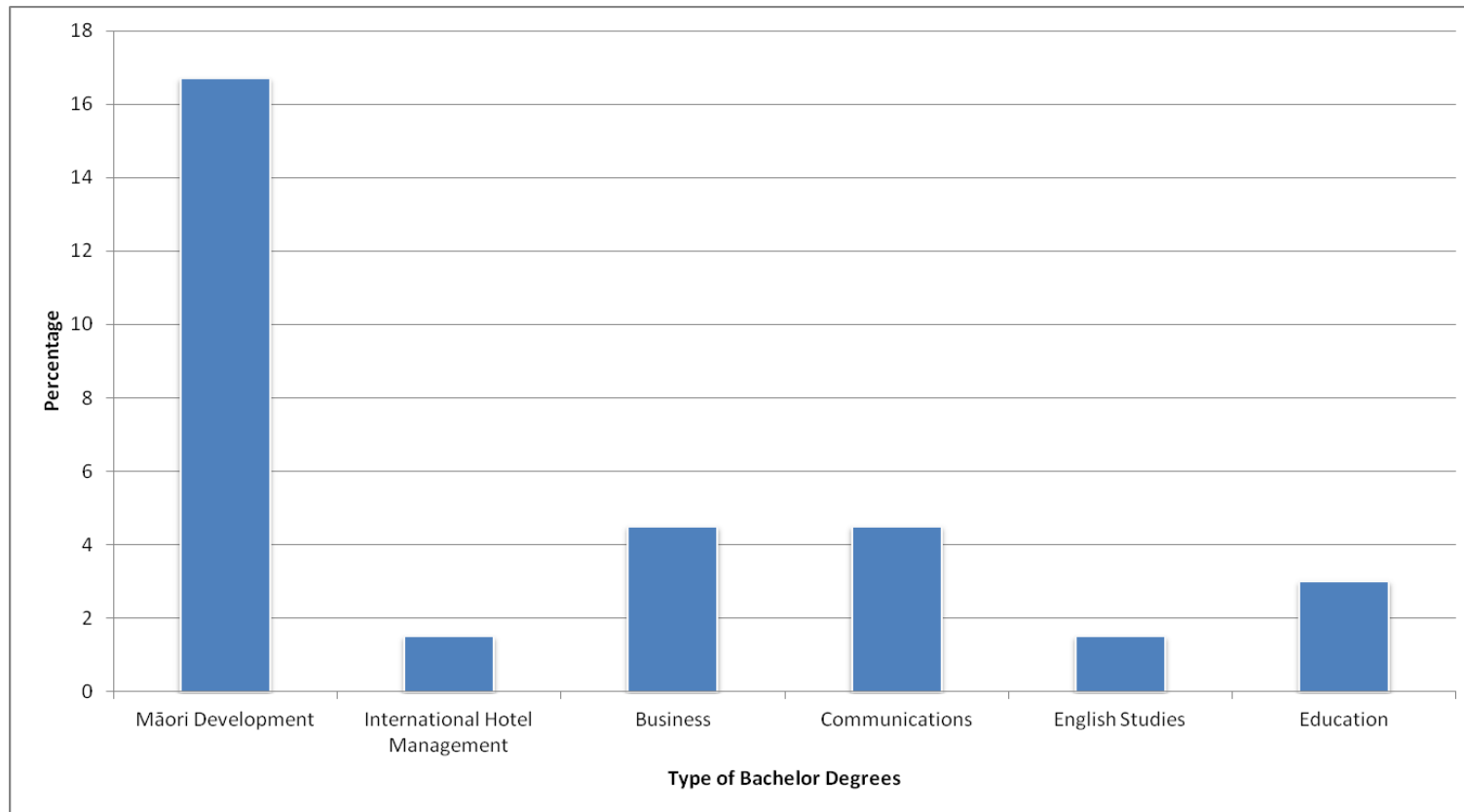
The type of course impacted on student numbers in the second and third year papers. This is shown in Graph 11 which showed that all students in the more advanced papers *Te Pihinga* and *Te Māhuri* were enrolled in the degree course, Bachelor of Māori Development. Of the survey participants, only degree students were enrolled beyond the beginner level of *te reo Māori*. Graph 12 shows that students taking a Bachelor of Māori Development made up the majority of degree students.

The figures regarding student numbers after the first year are not encouraging when looking at developing language proficiency. They showed interest and motivation at the beginner level not being sustained through to the more advanced levels of the language. This has implications for the wider Māori language speaking community, as language proficiency is critical in language revitalisation and intergenerational transmission of language.

Graph 11: Participants by course type



Graph 12: Māori language students and type of Bachelors degree



It is worth considering what factors might contribute to the severe drop in numbers after the beginner level. At present the Faculty does not have an undergraduate Māori language degree or a clear pathway for students wanting to specialise in *te reo Māori*. Most undergraduate students taking Māori language papers were enrolled in a Bachelor of Māori Development (see Graph 11). The introduction of a degree course majoring in the language could impact on the retention of students beyond the beginner papers.

Aspects of this were explored by Nock in her research on Māori language students in a “mainstream” university. She compared language students within a “fast-track” intensive Māori language course to those taking Māori language papers as part of a degree course. Her research compared eight years of Year 3 students’ class contact hours, course grades and averages, withdrawals and failures. She found that students in an intensive, immersion pathway “out-perform” the other students in assessments (Nock 2006:48). However, her research is limited, especially with regard to language proficiency, which she feels is a critical issue.

However, of significance is that Nock’s research supports the development of an intensive Māori language programme in terms of course grades when compared with the more mainstream language learning.

There are other factors that need to be considered such as students’ perceptions of the effectiveness of the different routes in terms of, for example, growth of cultural knowledge and understanding and motivation in relation to undertaking further study (Nock 2006:59).

Nock calls for further research on these areas. A greater understanding of student proficiency before and after participating in Māori language learning would be of benefit to all Māori language providers.

The second factor contributing to the marked drop in student numbers after the first year may be the current nil-fee policy for the *Te Kāhano* beginner-level paper. If this policy, which is promoted as the Provider’s commitment towards the Māori language and the Treaty of Waitangi, is in fact counterproductive in terms of student progression, it needs to be reviewed.

The issue of the role of the impact that tertiary education has in language revitalisation is captured by Earle:

...more could be done to encourage students to continue to be engaged in language learning, including improved pathways to further study and other language learning.

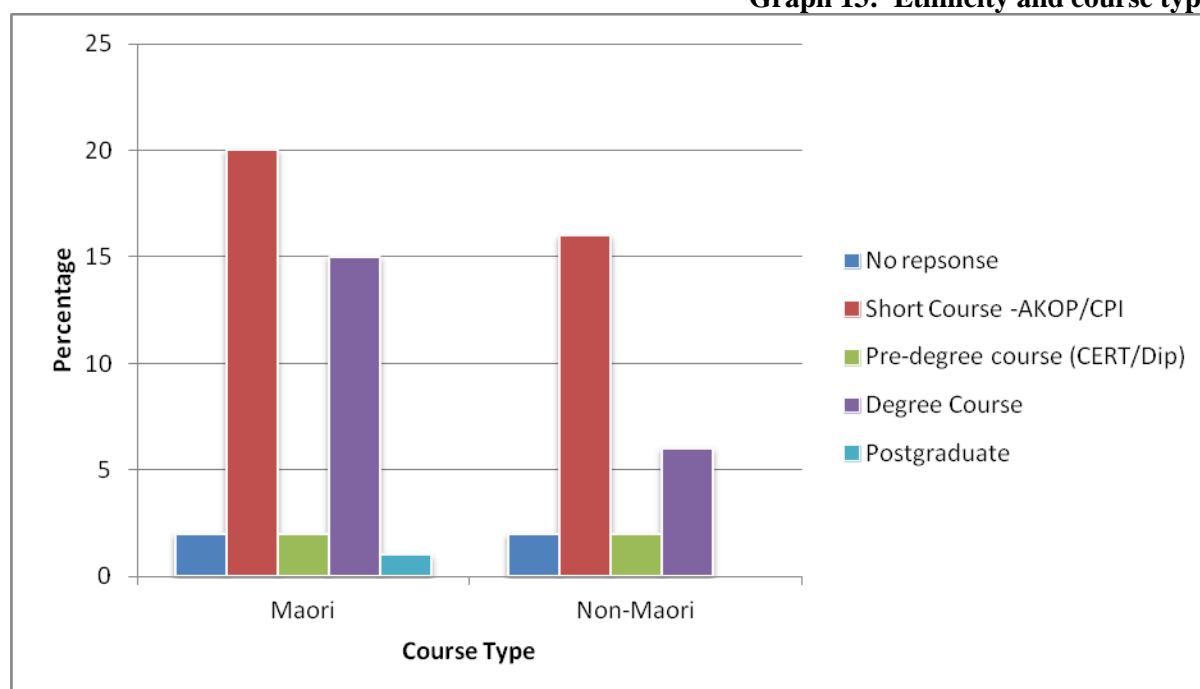
If engagement in te reo Māori courses at tertiary level is to result in a continued and sustainable improvement in language proficiency, there is also a need to consider what options are provided for students beyond the initial period of study and to move into higher levels of study. This is a matter for communities, families and individuals to consider, as well as government and education providers (Earle 2007:63).

Course type and ethnicity

Ethnicity figures compared with course type, as in Graph 13 below, showed that Māori were more likely to be doing a short, non-degree course than non-Māori. Chi Square test ($\alpha = .05$) confirmed that ethnicity of students does not have a significant association with the type of course students are enrolled in (p-value <.655).

This further reinforced the reality that most people learning Māori were not enrolled in a degree course and they did not go on past the beginner level. Earle's 2007 research noted that most students were enrolled full-time at certificate level, not in degree level papers, in *wānanga* (Earle 2007:27). Of importance though was the larger number of Māori to non-Māori in the degree course, who, according to this survey, were more likely to progress beyond the beginner level.

Graph 13: Ethnicity and course type



Summary of Student Profile

The student survey revealed that a Māori language student at this tertiary provider was likely to be either a young female or older male, Māori, affiliated to an *iwi* outside the Auckland region, enrolled in a non-degree course and unlikely to progress past being a beginner learner of Māori. Both young females and older males had significant roles in contributing to language revitalisation efforts at a local, regional and national level. The lack of progression from beginner to more advanced, proficient speakers of *te reo Māori* suggests that there was room for improvement in or at the very least, a change in direction for how the provider could contribute to language revitalisation efforts at a regional and national level.

Access to Technologies

Access to the Internet

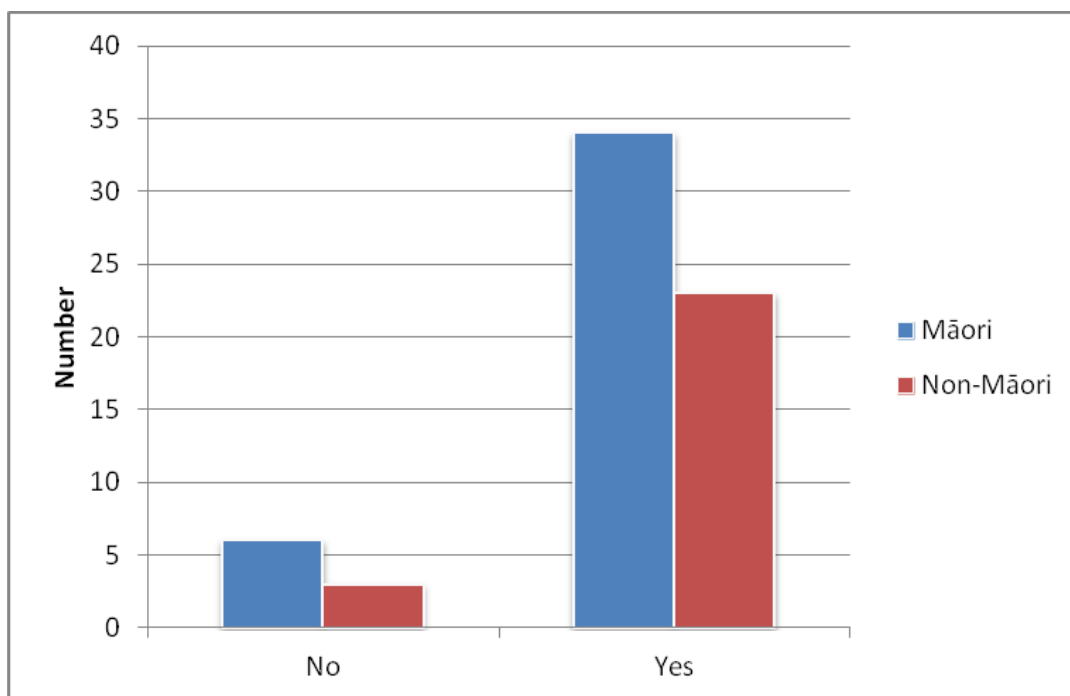
The survey asked students if they had access to a computer and the Internet. The results from this part of the survey were encouraging. All participants responded to this question. The results of the survey showed students had high rates of access to computers and the Internet.

- 92.4% of students have access to a computer
- 86.4 % have access to the Internet
- 84% have a broadband connection

If access was cross-tabulated with ethnicity, the results supported recent statistics that indicated that the digital divide between Māori and non-Māori, a concern of earlier commentators such as Parker (2003) and Corscadden (2003), was not applicable here. The results of the survey showed that Māori access was greater than that of non-Māori, as represented in Graph 14.

However, caution is needed here as according to a Chi square test, this sample does not reflect the population and is not statistically significant (P value of .6899).

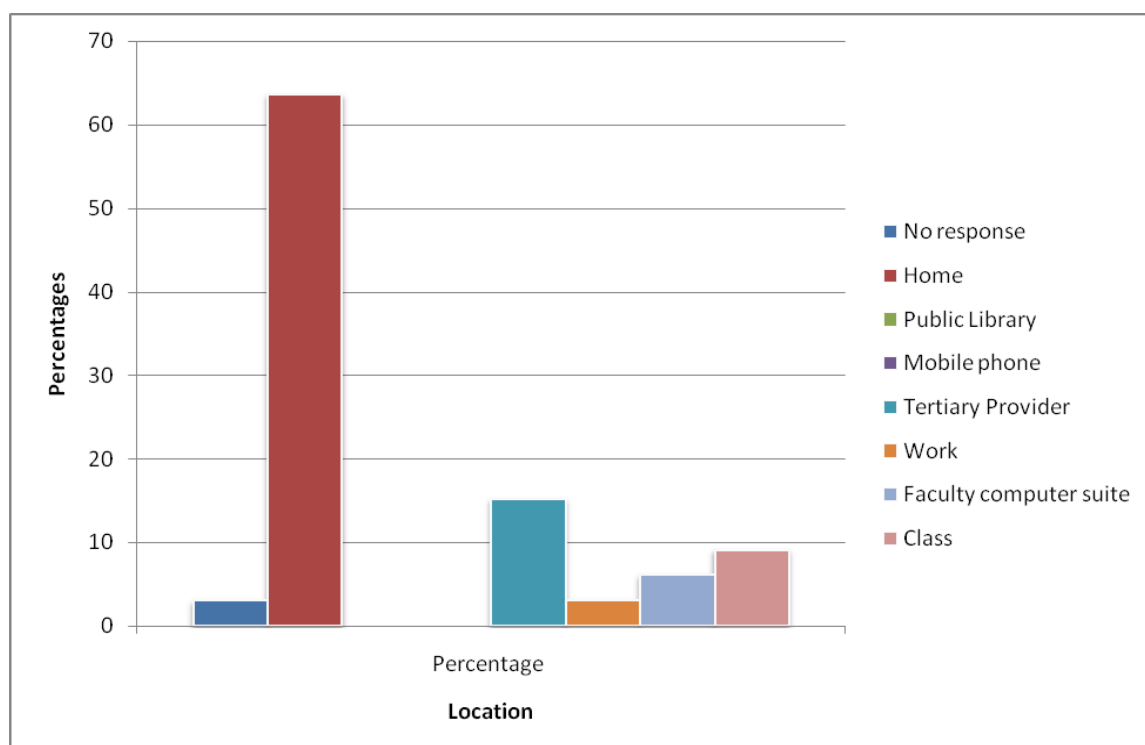
Graph 14: Ethnicity and Access to the Internet



Previous research does indicate change. The 2010 report *The Internet in New Zealand 2009* observed that 95% of Pākehā and 97% of Asian used the Internet at home compared to 80% of the Māori and Pacific population (World Internet Project 2010:34). This was a marked improvement from the figures given in a 2001 report, *Māori Access to Information Technology*, which stated that only 46% of respondents who were Māori had access to the Internet, compared with 65% for European, 35% for Pacific Islander and 75% for ‘other’ (Te Puni Kōkiri 2001:17). A recent Te Puni Kōkiri report confirmed the high rates of Internet access in this research, particularly for young Māori (Te Puni Kōkiri 2010a:5).

Students were asked to indicate where they most accessed the resources. The survey results showed that although the institution provided computer suites, and even though the Faculty had its own computer suite, most students were accessing the resources from home (see Graph 15). Note that some locations, such as the public library and mobile phones, were not used at all.

Graph 15: Location of student to access to online resources

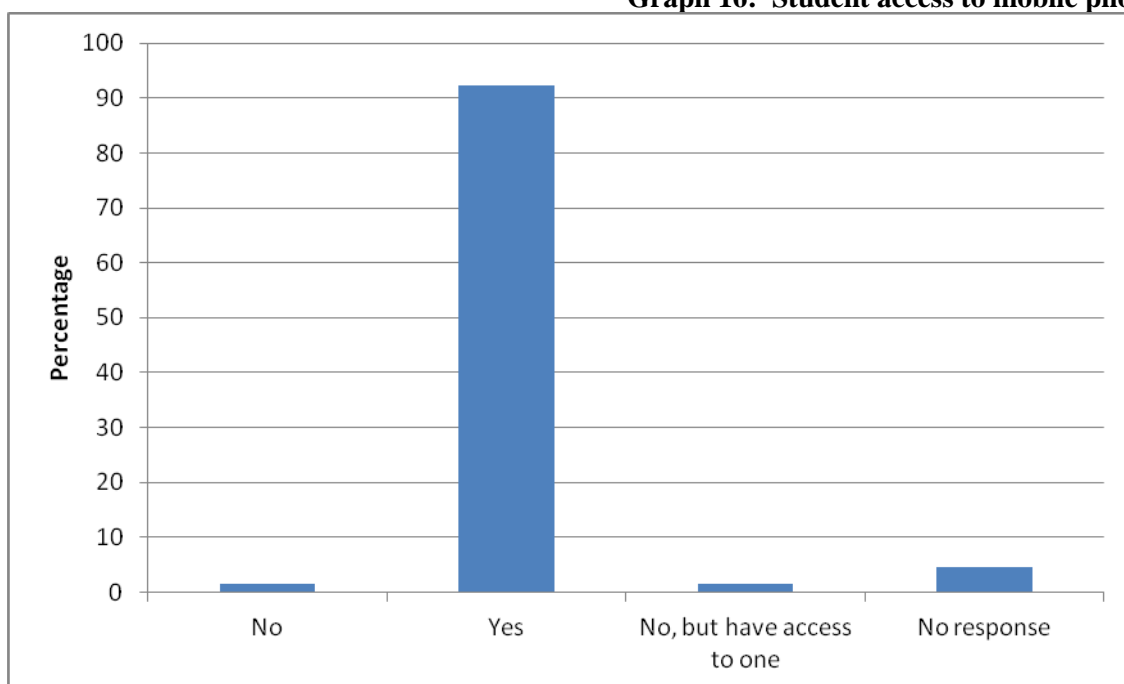


As most of the students are accessing the resources from home, it is safe to assume that most of them were using the resources without access to a Māori language speaker. Therefore, the language content had to be appropriate. All instructions, navigation and usability need to be delivered in a way that will assist L2 learners of Māori, in an independent context.

Mobile Phone Ownership

One of the survey questions related to access and ownership of a mobile phone. Three people did not respond to this question. Not surprisingly, the survey reflected the increasing ubiquity of the mobile phone in modern life; students in the Faculty were no exception, as seen in Graph 16.

Graph 16: Student access to mobile phones



These results were consistent with results of a Te Puni Kōkiri survey which found that not only was ownership of a mobile phone very high among young Māori (over 90% for Māori between 15 and 24 years of age), but that “Māori, and especially young Māori, are more likely to be using them [mobile phones] for a wider range of functions” (Te Puni Kōkiri 2010a:4).

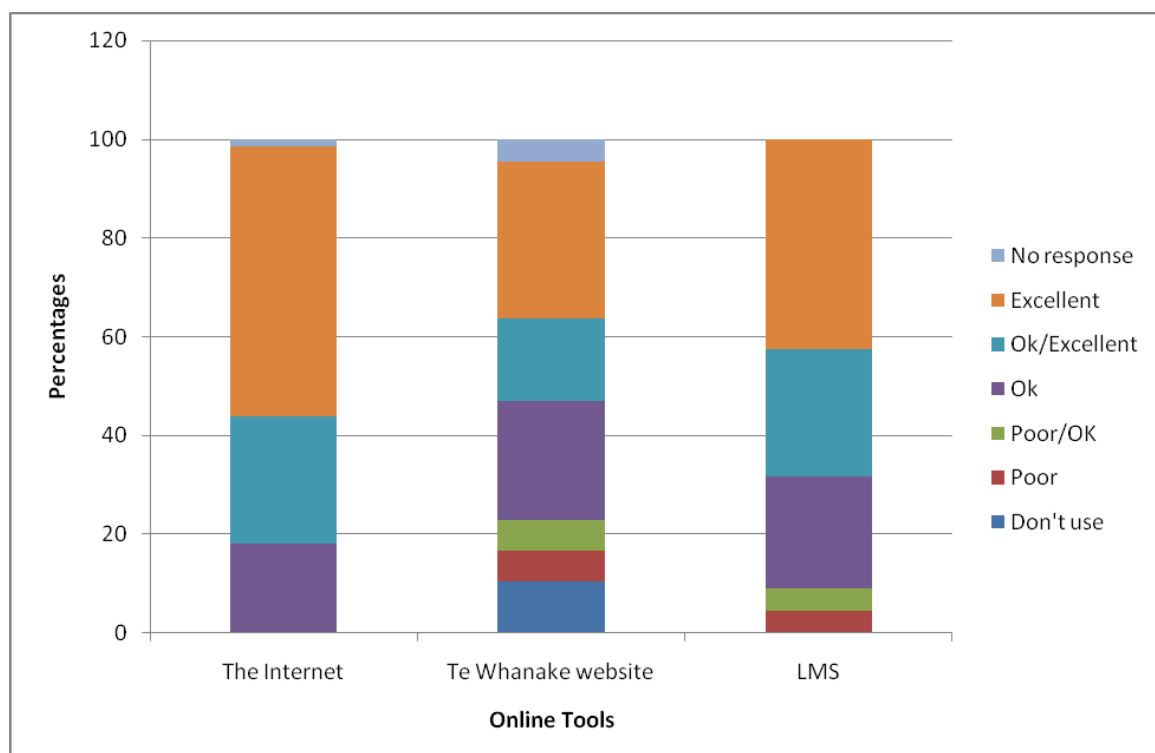
Despite the high rates of ownership, only 15 students of the 55 students who responded to a question at the end of the survey chose the option favouring an “increased use of mobile phones to deliver course content and information”. Clearly, students are not yet aware of the potential for mobile phones in a learning context. But if students are not using the computers provided for them, and yet bringing a pedagogical tool with them, it would seem unwise, if not uneconomic not to take greater advantage of this.

The high rates of Māori access to and use of information technologies supports time, money and effort being invested in providing quality digital and online tools for L2 learning of *te reo Māori*. Online resources were only of value if the communities who most benefit from them can access them.

Student Ability

The second part of the survey asked students about their own ability, the usability of the resources and how often they used the resources. Note that the terms Internet, *Te Whanake* and the LMS referred in general terms to these tools, rather than to specific L2 learning aspects of them.

Graph 17: Student self-assessment of their ability with the Internet, *Te Whanake* Online and the LMS

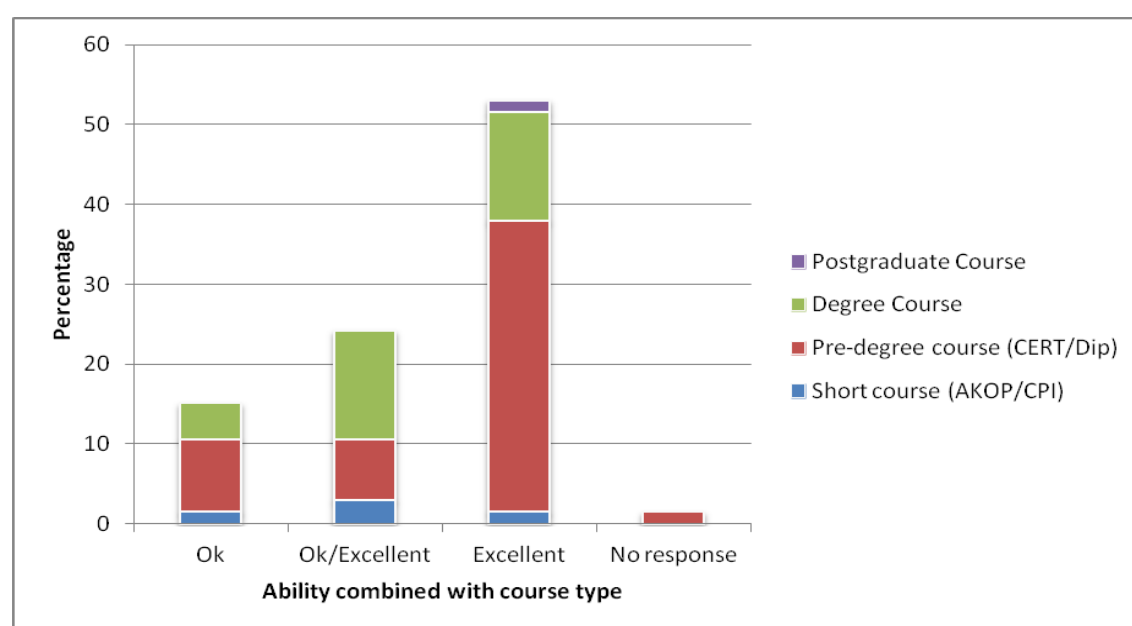


Students were asked to rate their own ability with the Internet, the *Te Whanake* website and the LMS. Instead of a graph for each separate resource, the responses have been combined into a single graph (see Graph 17). This graph shows different attitudes towards the three resources. For example, most students rated their own ability on the Internet as “OK” or above, and the largest group was “Excellent” (36%). In other words, no students rated their ability below “OK”. Note also the very small number of “No response” (1.5%). By comparison, the range of responses for the *Te Whanake* website and the LMS were more varied and included students who felt their ability was poor on those two resources. There were two exceptions. The first was the small number of people who didn’t use *Te Whanake* online (10.6%). This did not correspond however, with the data discussed in the following section, which looked at the usability of the resources. It highlighted that, with the exception

of two resources, the online dictionary and the podcasts, most students' use of *Te Whanake* online was very limited.

The second exception was the number of students who rated their ability on the LMS as “Excellent” (42%). To gain further clarity on this response, students' ability on the LMS was compared with course type. It was possible that students were rating their ability on the LMS *in general* rather than relating specifically to the Māori language resources. The cross tabulation of these two sets of data would not support that, as is shown in Figure 18. Most students who rated their ability as “Excellent” were in fact in the short course type (15 out of 36 responses). Short-course students were unlikely to be using the LMS for other courses, so it could be assumed that they had in fact only used the LMS for their Māori language papers.

Graph 18: Student Internet ability and course type



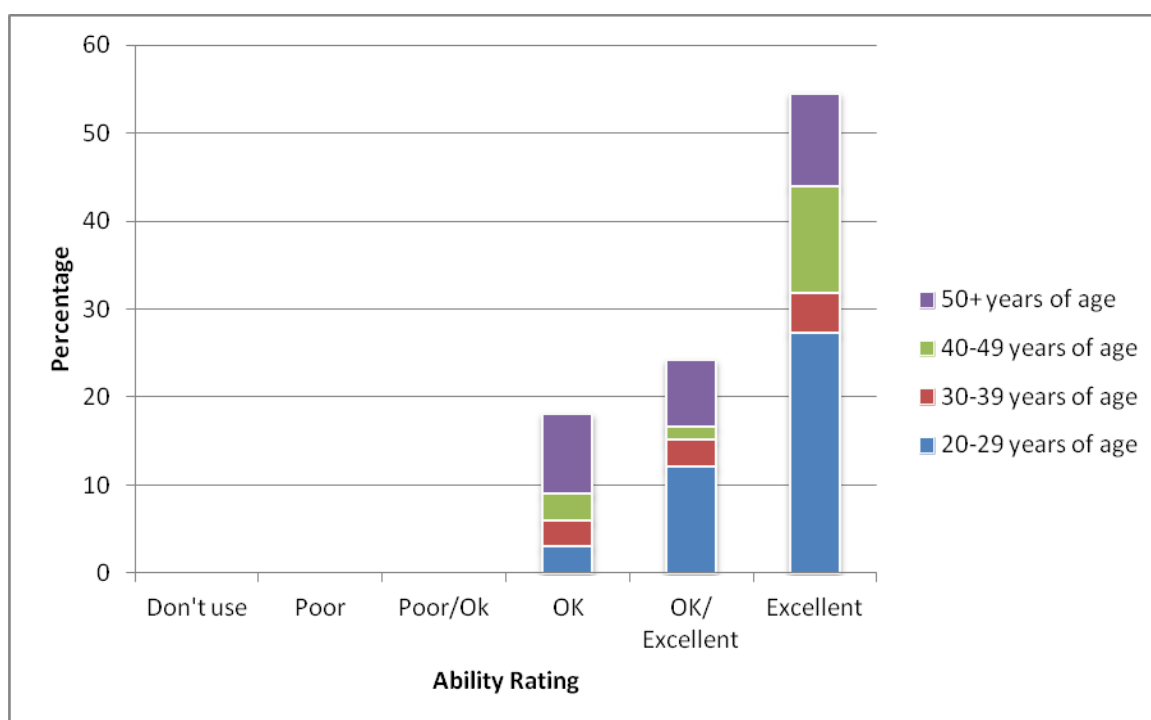
The high number of short-course students is expected, as they were the majority of students – over 50% (see Graph 11). This result was discussed with one of the Māori language teachers. She was not surprised at the more confident use of the LMS, as students had to use it specifically for required assessments. The more frequent and more confident use of the LMS (see Figure 18) reinforces Taylor and Clark findings that successful digital resources are designed with specific “educational goals” and a recognisable “pedagogic intention” (Taylor & Clark 2010:396). They stress that students recognised this and they responded to it in the use of the resources.

Student Ability and Age Range

As noted in the first part of this chapter, the survey results indicated that there is a significant number of students over 40 years of age. Nearly ten years ago now, Marc Prensky in his 2001 article, described two distinct groups of younger and older users of digital content – digital natives and digital immigrants respectively (Prensky 2001a). The assumption that older users are less comfortable and less confident users of online and digital content is not supported by this survey.

The results of the question on ability were cross-tabulated with the age of the participants and revealed that self-confidence and ability was not related to age (see Graph 19). A recent American report dispelling five key myths on the use of technology in the classroom found that “teachers’ years of experience – and presumably their ages – seem to make little difference in their frequency of technology use” (Grunwald 2010:11).

Graph 19: Students’ self-assessed ability related to age



Critics have challenged Prensky’s binary approach to describing learners, which presupposed that only younger people could be digital natives and older people digital immigrants. Toledo proposed another group – digital tourists – who “embrace the language and tools of the foreign land only in order to function while they are there [but resist] the application of

technology to their personal and professional lives” (Toledo 2007:88). She concludes, referring specifically to teachers, “the propensity to immerse oneself in technology ... are all functions of exposure and interest, not age” (2007:91).

Another factor to consider is that Internet use may be different outside of learning contexts. The most recent comprehensive report on the widespread use of the Internet in New Zealand, *The Internet in New Zealand 2009*, included a question on ability and noted that “confidence in one’s Internet ability decreases with age and that younger people generally have a more positive attitude towards the Internet” (Smith et al 2010:26). Perhaps students of all ages now recognise the necessity to use the digital environment and this would account for the difference between the results in this survey and that of the wider community.

It is evident that the increased ubiquity of the digital environment in modern life is being reflected in the blurring of the line between digital natives, tourists and immigrants. This occurs as *all* learners and teachers both create and respond to a demand to be familiar and confident users of digital content and environments. It is the role of educators and institutions to capitalise on that confidence.

Usefulness and Frequency

The questions on usability and frequency asked participants to rate the usefulness and frequency of each of the separate resources within *Te Whanake* Online and the LMS. This included eight resources within *Te Whanake* Online and three within the LMS.

The responses were “stacked” together to show usability and frequency within the two sets of resources rather than using charts for each individual resource. Although usability and frequency were two separate questions in the survey, they were considered together for analysis purposes to avoid replication and repetition (see Graphs 20 & 21).

The survey was designed on the assumption that students were using the resources, but according to the survey results, overall students’ access to the *Te Whanake* online resources particularly was not high, with a few notable exceptions. This indicated that the expectation of the resources being used as self-directed learning tools was not realistic.

Most students responded to this set of questions, the “no response” rate being extremely small.

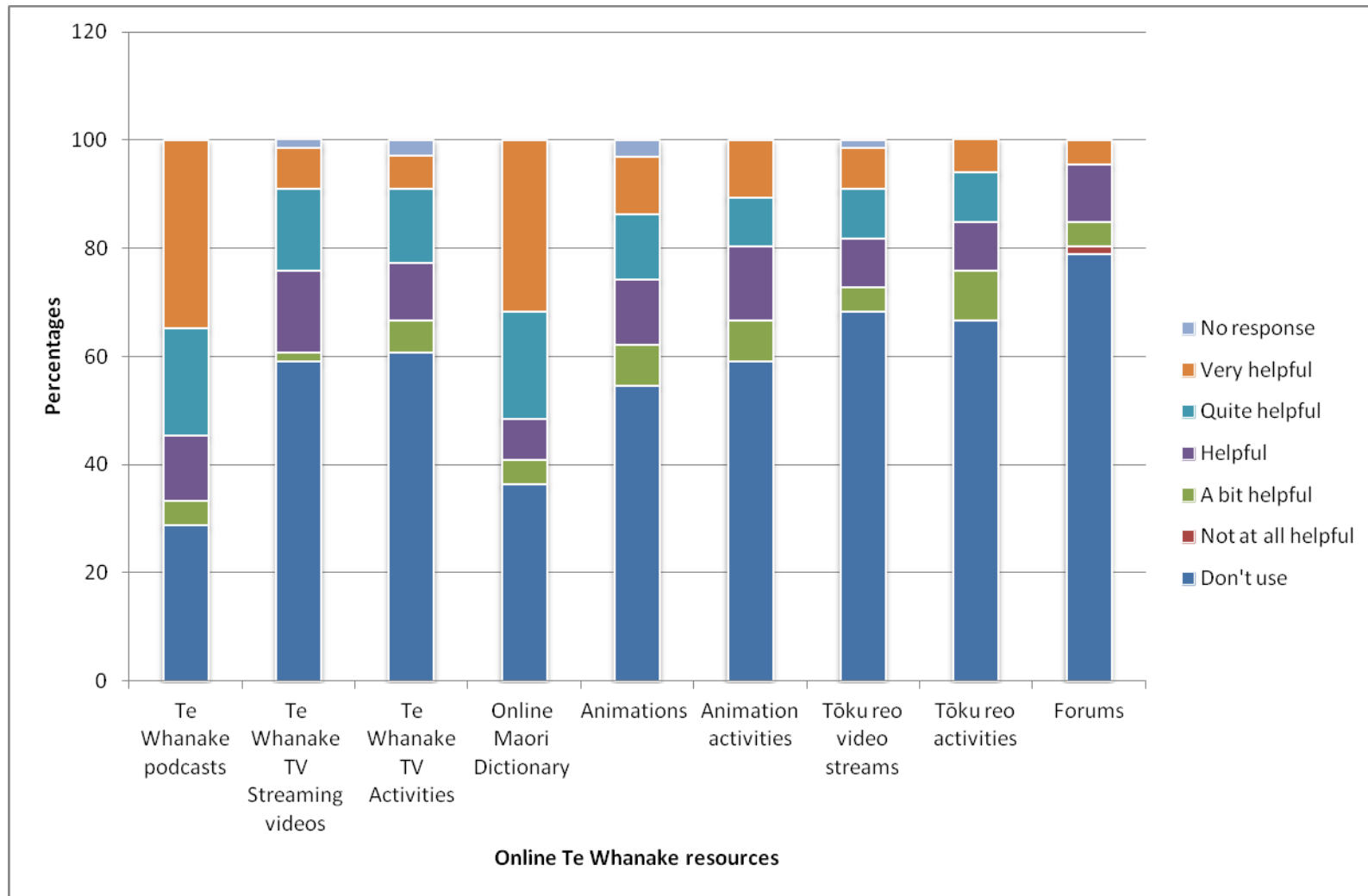
Usefulness of Te Whanake and the LMS

Graph 20 shows student rankings of the degree of usefulness of the *Te Whanake* online resources. Students considered the *Te Whanake* podcasts and the online Māori dictionary to be the most useful resources. However, over 50% of the participants indicated that they did not use most of the resources, with the exception of the podcasts and the online dictionary. The most poorly rated resource was the forum – nearly 80% of students didn’t use this resource. According to the survey results the resources could be ranked from most useful to less useful as:

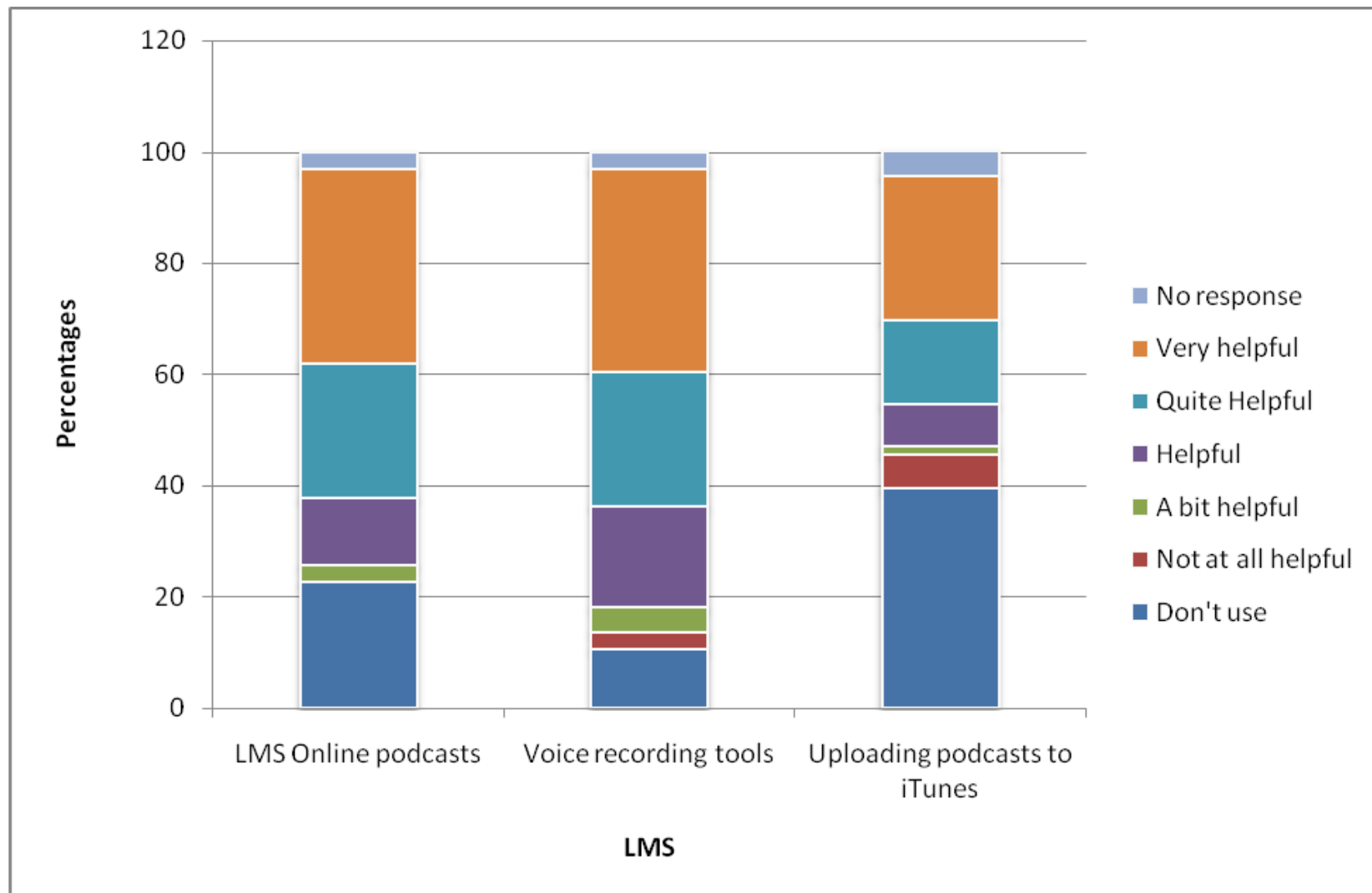
1. *Te Whanake* podcasts
2. Online Māori dictionary
3. Animations
4. Animation activities
5. *Te Whanake* Streaming videos
6. *Te Whanake TV* activities
7. *Tōku Reo* podcasts and activities
8. *Tōku Reo* video streams
9. Forum

The forum was the only resource that students registered as not being at all useful. The responses for the LMS (see Graph 21) were more evenly spread and the number of students who said they did not use the resources on the LMS was significantly smaller than for *Te Whanake* online. The most useful LMS resources from the survey results were the Wimba Voice Tool (WVT) and the LMS podcasts. The WVT had the most positive response. This is the resource used to submit students’ work to the teacher for assessment.

Graph 20: Degree of Usefulness of *Te Whanake* resources



Graph 21: Degree of Usefulness of LMS resources



Frequency of use of Te Whanake and the LMS

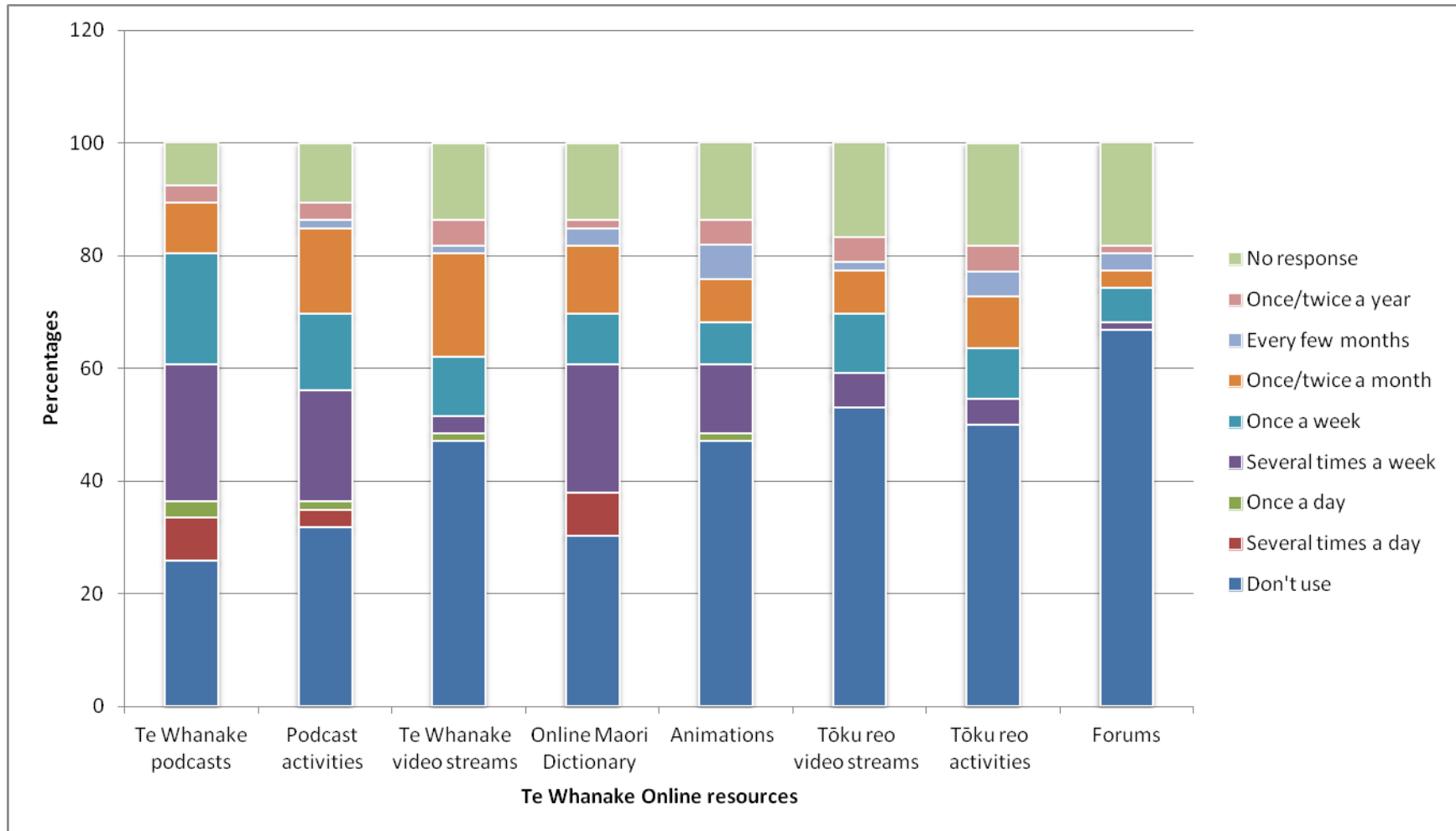
Like the question on usefulness, the frequency question highlighted the numbers of students not using the resources. This question had a higher rate of no response, suggesting an unfortunate degree of repetition from the previous question. Not surprisingly the most useful resources were the most frequently used, i.e. the online dictionary, the podcasts and the podcast activities. The use of the LMS was more frequent (see Graph 23) and more regular than *Te Whanake* (see Graph 24), which reinforced the idea that direction and a clear pedagogical need was inherent in the successful use of digital tools by students.

For both resources, participants were asked to identify reasons why they selected “don’t use”. The responses to the open-ended questions were then sorted and coded under five sub-headings:

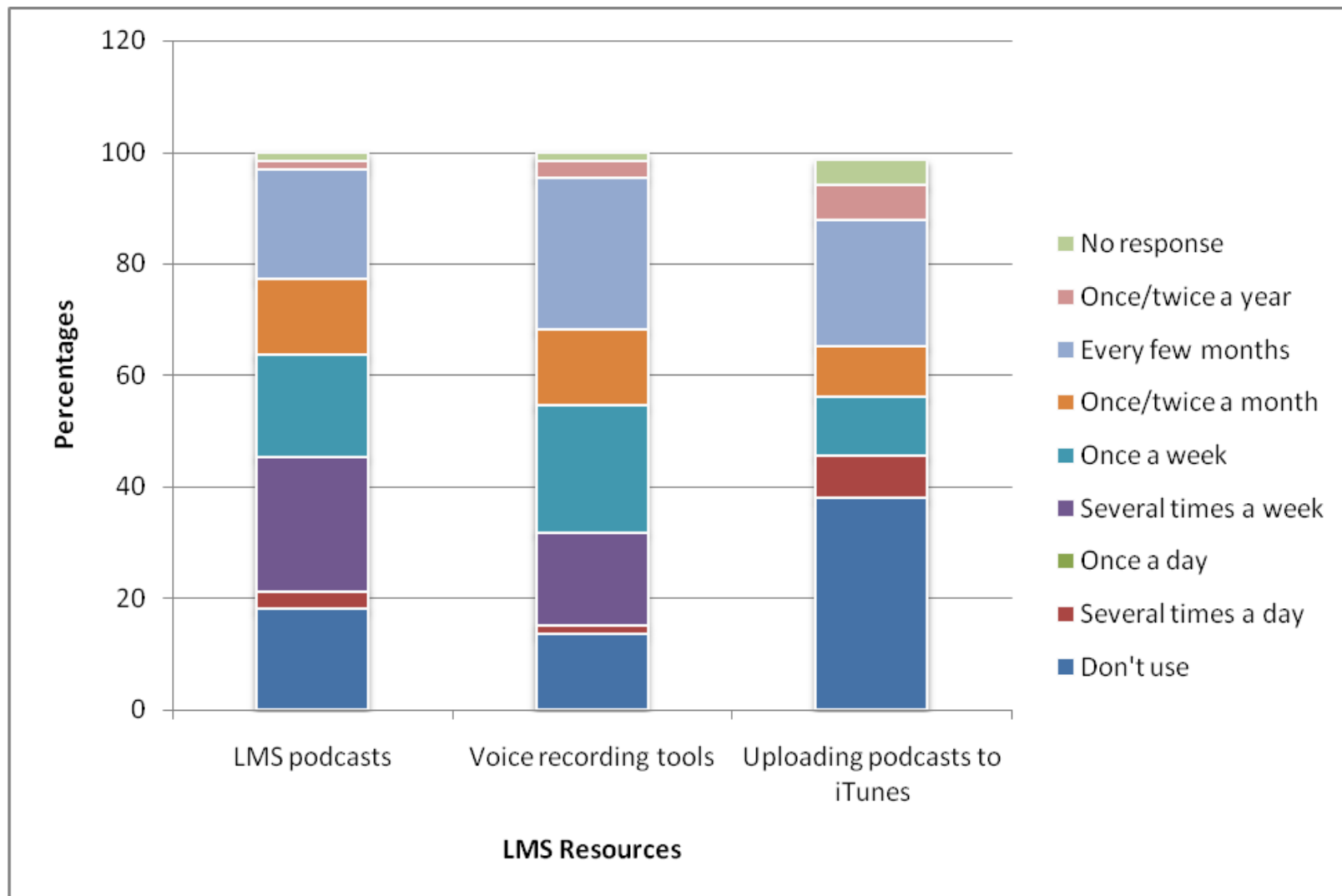
1. Didn’t know about them
2. Don’t need/ Not necessary
3. No time
4. Technical difficulties
5. Can’t use computers

The results for this question can be seen in Graph 25, which shows the different responses for each of the two groups of resources, that is *Te Whanake* Online and the LMS. The most common reason of why students did not use the *Te Whanake* resources was that they did not know about them, and for the LMS, it was due to technical difficulties, mainly to do with not having iTunes or a mp4 player. Only one student mentioned log in difficulties. The high rate of students who were not aware of the resources was surprising.

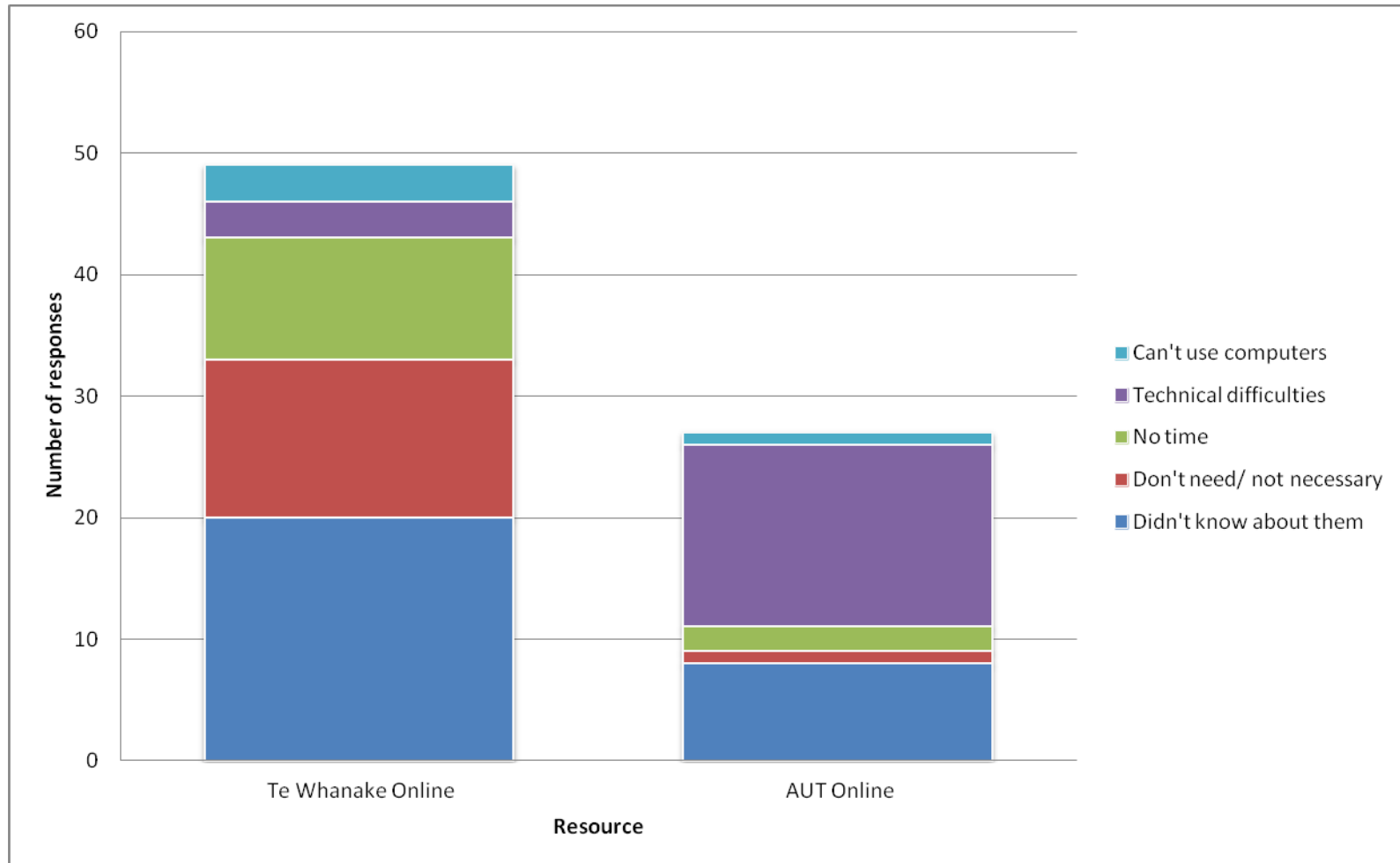
Graph 22: Frequency of use of *Te Whanake* Online



Graph 23: Frequency of use of the LMS

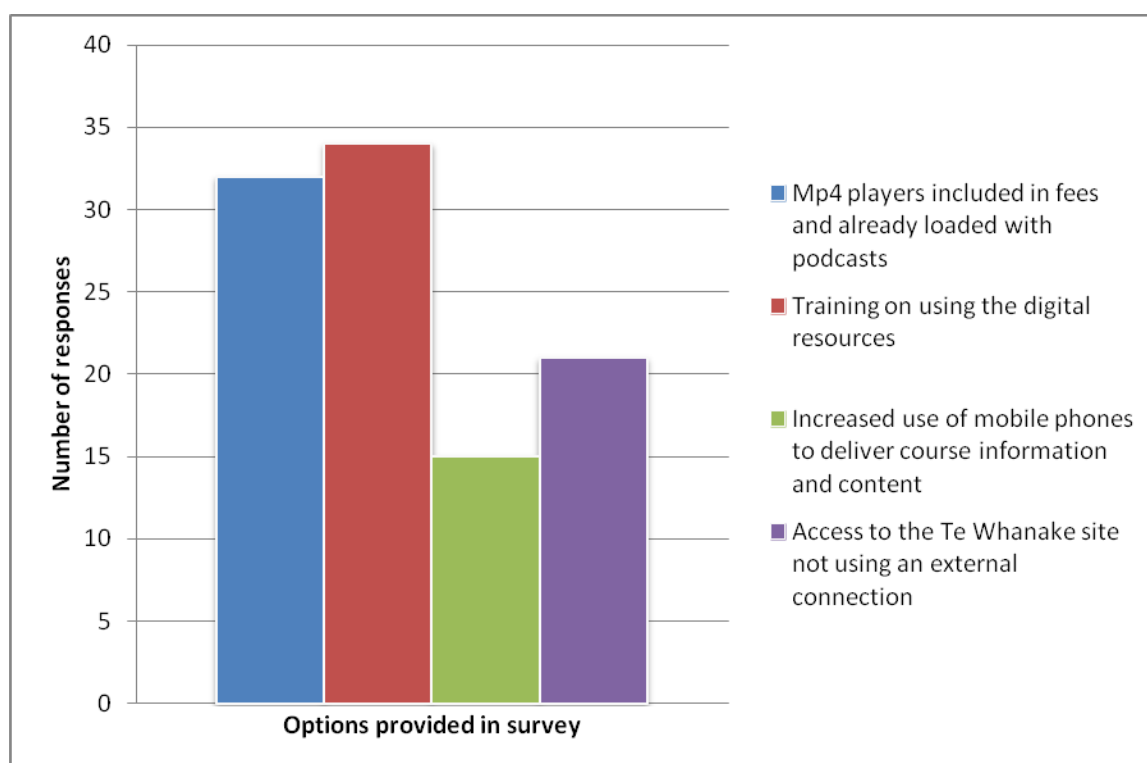


Graph 24: Student reasons for not using resources



In the last part of the survey students were asked to identify which, out of four options, they thought would enhance their experience as a language learner of Māori (Table 26). The lack of enthusiasm around mobile phones was surprising as mobile learning is the next natural step for learning. As the web-enabled mobile phone becomes an ubiquitous feature of modern life it needs to become more a feature of students lives.

Graph 25: Number of responses for course enhancement options.



The responses to this question confirmed that there was need for more emphasis on training students on *how* to use the range of tools available to them. This was echoed in the focus group discussion with the teaching team as outlined in Chapter Seven. This would be different for both groups, as the teachers need more training on the pedagogical application of the resources.

Google Analytics Results

The results of the survey have been explored and show a high rate of use for specific resources, i.e., the *Te Whanake* podcasts and the animations, but limited use of *Te Whanake's* other resources.

These results were correlated with *Te Whanake's* site statistics using Google Analytics. Site statistics were taken for the year December 2009 to December 2010. The LMS is not included, as the Google Analytics applies only to the *Te Whanake* site. The results in the site statistics are shown in Table 8.

Table 8: Summary of Google Analytics for *Te Whanake* website for period 4 December 2009-4 December 2010

	Number of Visits	Average Time on Site (min)	Change over the year as a %	Bounce Rate as a %
Animations	19 101	10:40	15.68	32.96
Forums	8 013	1:49	-25.76	63.68
Podcasts	11 661	6:59	13.5	30.01
<i>Te Whanake</i> TV	3 992	4:28	6.48	34.09
Māori Dictionary	1 093 211	5:55	57.98	22.39
<i>Te Whanake</i> Home page	57 768	1:43	6.27	88.17
Totals/ Averages	1 193 746	3	17	45

Source: Google Analytics.

The site statistics confirm that the online dictionary and the animations are the most used resources. And this corresponds with the degree of usefulness and the degree of frequency shown for the *Te Whanake* resources in Graph 20 and Graph 24.

The online dictionary had over a million visits (1 093 211) from December 2009 to December 2010. The statistics for this page show that a user spends nearly six minutes on the dictionary, and during this time they are looking at approximately five words per visit. The online dictionary site is mainly being accessed from search engines (67.84%). The next group is accessing the site directly. Only a tiny percentage, (1.91%), is entering the dictionary from the *Te Whanake* site.

Although the *Te Whanake* homepage received a large number of visits (57 768 visits), it is not considered a resource page. The disproportionately large number of visits to this page,

compared with the resources, and its high bounce rate (88.17%) indicate that people are visiting this page but not going on to other parts of the site. Further investigation of how to lower the bounce rate on this important page may help towards a greater use of the resources.

The animations and the Podcasts are the next most used *Te Whanake* resources (19 101 visits to the animations and 11 661 visits to the Podcasts). The animations have the longest average time spent on those pages.

According to the site statistics the least used parts of the site are the Forum and *Te Whanake* TV. This also corresponds with the student survey. From a language learning point of view, this is disappointing as both these resources have much to offer language learners. The use of the forum is closely tied to the television programme, *Tōku Reo*. The TV series have much to offer language learners, providing instruction and Māori language used in every day contexts. They are particularly relevant to L2 students enrolled in the Faculty as the content is all based and related directly to the *Te Whanake* series.

The site statistics reveal an interesting picture of the *Te Whanake* website. They have been used here to reinforce the results of the survey, which show that only certain resources are being used.

Conclusion

The survey results provide an insight into student experiences of the use of the digital tools. Most students appear to be technologically confident and connected but they are not accessing the range of resources to the degree that would be most beneficial to them as L2 learners of *te reo Māori*.

The use of the digital tools did not correlate to teachers' expectation of the resources as self-directed learning tools. The exception to this was use of the dictionary, the podcasts and the WVT. This reinforced research which shows that the successful integration of digital resources was dependent on an explicit pedagogical need (Taylor and Clark 2010).

The online dictionary was the most popular resource of the *Te Whanake* Online resources. Site statistics revealed a steady increase in the number of visits. This was fulfilling a need for online Māori language resources. There were aspects of this resource which attracted and

retain learners and these need to be capitalised more within *Te Whanake* Online to increase the use of the resources. Consequently, L2 learners of Māori are currently missing out on a rich and free-to-access language learning environment directly targeted at them.

The survey results highlight that for many students the wider experience of learning Māori was not restricted to supporting an academic path and quite temporary. Few students progress past the beginner level and this must impact on wider Māori language revitalisation efforts. The type of student enrolling in the Māori language papers needs further investigation. Further work is needed to explore the two distinct groups of language learners to find common and specific needs to increase their language proficiency in *te reo Māori*, as both groups have important roles in language revitalisation.

Chapter Nine

Conclusions and Recommendations

In many ways the students' and teachers' experiences in this small research project mirror many of the challenges in the integration of technology in wider learning contexts. Researchers, academics and teachers are proposing that the technologies are forcing pedagogies to change, rather than a change in pedagogies driving the development of new technologies (Zhao 2005, McLoughlin & Lee 2008).

However, it is clear from this project and other Māori language-based research (Institutes of Technology and Polytechnics of New Zealand 2004, New Zealand Council for Education Research 2004, Tiakiwai & Tiakiwai 2010), that there are unique factors in the teaching of Māori language and topics. These are led primarily by the imperative of combining cultural factors within the design, content and implementation of digital resources.

Inherent in this is the importance of *te reo Māori* in the exchange of the *mauri* (life force) that the language carries, which can only happen in interaction between speakers, i.e. the teacher and learners. As one of the Māori language teachers involved in this project emphasised, it cannot be transferred or carried by a digital resource, so digital resources can never replace the role of Māori language teachers.

This prioritises the interaction between teacher and learners as the most important aspect in Māori language learning. This is reinforced by the central concept of *ako* (to learning, teach, advise, instruct), which is a lack of delineation between learning and teaching and an ongoing reciprocity between student and teacher (Ka'ai et al 2004:208), and of course includes the relationships and interactions between the learners.

As a result of interaction with the Māori language teachers, an awareness of the issues around the adoption of educational technologies and investigation into the evolution of Māori pedagogies the following model, He Anga e-Whakaako, (Figure2) is proposed with a particular emphasis on the teaching and learning of *te reo Māori*.

Figure 2: *He Anga e-Whakaako Reo*

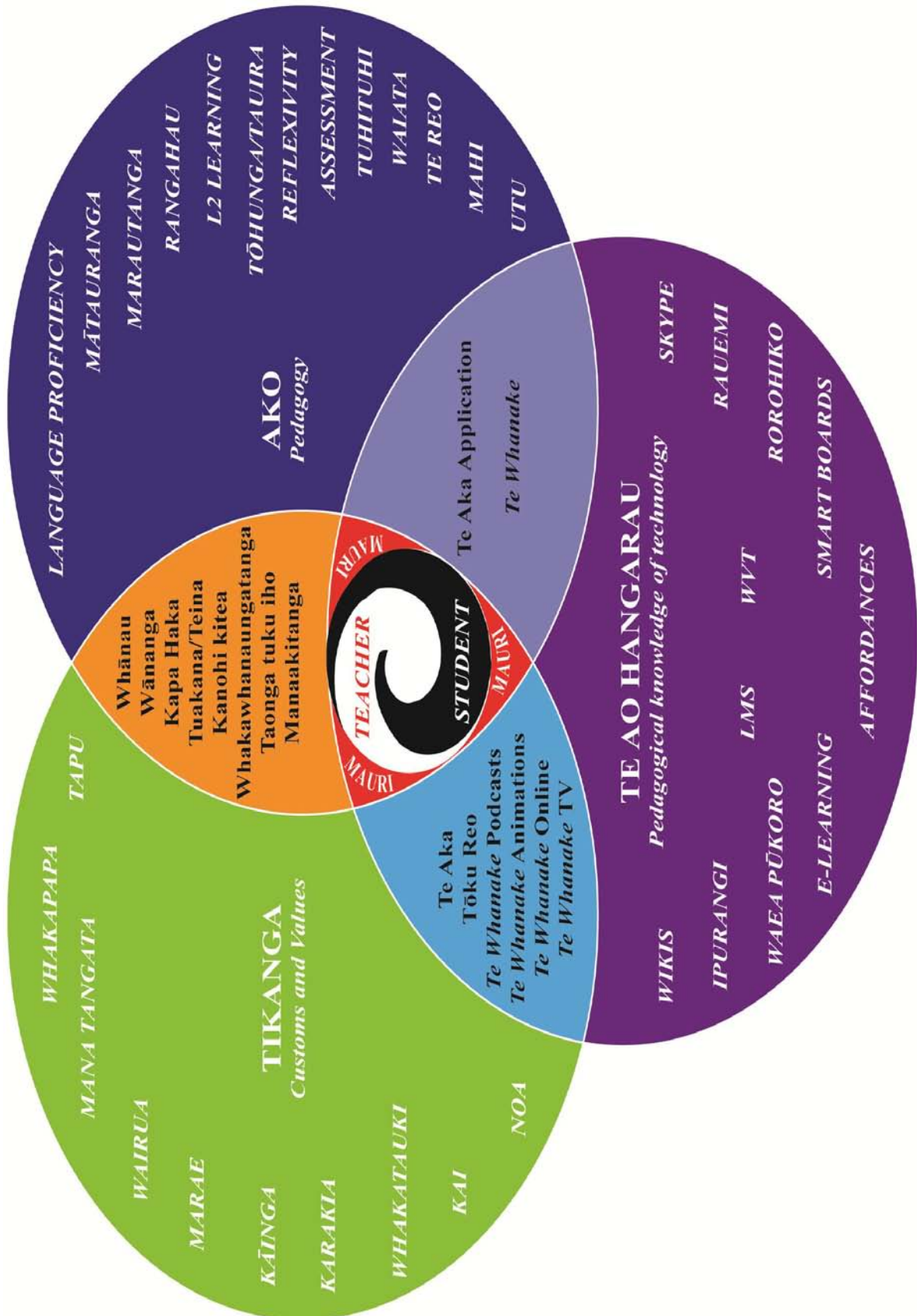


Figure 2, on the previous page, illustrates the three important elements needed for the use of digital resources in Māori language teaching. It places human interaction at the very centre of the three elements, not only because it carries the *mauri* of the language, but because it also links the three elements, which are:

- *Tikanga* – Māori customs and values
- *Ako* – pedagogical principles based on *tikanga Māori*
- *Te Ao Hangarau* – pedagogical knowledge of educational technology

The teachers emphasised in the focus group discussion the central role of *tikanga* in the teaching and learning of *te reo Māori*. This critical aspect corresponds with the limited related research, which also emphasises that any future development must “merge Māori epistemology and tikanga with technology” (Institutes of Technology and Polytechnics 2004). More research is needed on how this can be done and what aspects of digital technologies support the combination of *tikanga*, Māori epistemology and technology.

The second aspect, which is closely related to Māori cultural values and practices, is the use of Māori pedagogies, known as *Ako*. Ka'ai (Ka'ai et al 2004: 208) has summarised *Ako* into three interlinking areas,

- An integration and expansion of the **roles** between teacher and learner to include expert and novice (*tuakana* and *teina*, *tohunga* and *tauirā*) and involves communities (*whānau*, *hapū* and *iwi*) in education;
- An expansion of learning **contexts**, which may involve *marae*, *wharenuī*, *maunga* (mountains), classrooms, the environment and now the digital environment;
- Learning **practices** based on *tikanga Māori*, including *te reo Māori*, *wānanga*, *whānau*, spiritual aspects such as *wairua* (spirit, soul), *tapu*, *noa*, *manaakitanga*, *mana whenua* and *mana tangata* (mana of people).

As shown in Figure 2, the most visible combination of *tikanga* and *ako* are in learning practices and the intergenerational transmission of knowledge. All of these elements are included in the teaching of *te reo Māori* in the Faculty, and most of them were referred to directly in the focus group discussions with the staff.

These focus group discussions revealed a team strong in their knowledge of content and context, i.e. *tikanga* and *ako*, but were aware of their own need to increase their knowledge of *Te Ao Hangarau*, that is, how technologies are used in learning contexts. This accounts for why some of the digital tools and online resources are situated only within the *Te Ao Hangarau* area in Figure 2 and yet some are in the areas interlinked with *Ako*.

Ideally, all of the *Te Whanake* resources would be in either of the *Tikanga* and *Ako* areas. It is anticipated that once teachers are better aware of the ‘affordances’, or the learning opportunities within each tool, they will be used more by teachers and accessed more by students, as they become an integral part of the learning and teaching of *te reo Māori*.

He Anga e-Whakaako Reo

Figure 2 shows the combination of *Tikanga*, *Ako* and *Te Ao Hangarau* which represents ideal **content** in an ideal learning **context**. *He Anga e-Whakaako Reo* (Figure 2) is a model for *te reo Māori* teachers to understand the importance of the integration of digital Māori language resources into their classroom teaching in a digital world. It is also a tool which contributes to Māori language revitalisation as it focuses on increasing proficiency in *te reo Māori*.

The model combines three areas: *tikanga*, *ako* and *te Ao Hangarau*. It requires the teacher to understand the need to integrate Māori pedagogy, e-learning pedagogy related to technology underpinned by Māori values, when teaching *te reo Māori* using digital resources. It also requires the teacher to deliver a Māori language programme which maximises the use of the resources, thus maximising the opportunity for learners to increase their proficiency in the language. This can only happen by fully embedding the digital resources into the programme.

Of significance, is the *koru* (fold, loop, coil) figure in the centre of the model. It depicts two things:

- a. The learner-centred approach to teaching *te reo Māori*, *ko te reo te mauri o te mana Māori*.
- b. The interconnectedness of the student-teacher relationship.

The real success of Māori language teaching using digital resources, hinges on knowledge of *Te Ao Hangarau* and the elements contained in this area. This can be achieved through

regular professional development focussing on development of resources and increasing pedagogical knowledge.

This model has been designed with the ultimate aim of supporting Māori language teachers in trying to increase the number of proficient speakers of Māori in their Faculty by using digital resources.

Tiakiwai and Tiakiwai (2010) concluded in their report reviewing the literature on digital environments, that “there was a lack of sound pedagogical knowledge relating to e-learning” (2010:2) and more critically:

The literature suggested that emphasis on e-Learning was focused more on the technology, where professional development for teachers was often focused on learning how to use new technology rather than understand how the technology impacts on teaching and learning experiences. Some of the literature pointed to a need to address this concern with a greater focus on pedagogy in e-Learning (Tiakiwai & Tiakiwai 2010:2).

This is the single most important issue in the integration of digital resources in learning contexts. More research and active professional development is needed if the use of the digital resources is to be meaningful in the development of Māori language speakers, to ensure the *mauri* of the Māori language, and the language itself, remain part of Aotearoa/New Zealand’s cultural landscape.

Outcomes of the Research Process

Kaupapa Māori research practices were used as the framework to locate and synthesise the nature, topic and context of this research project. The role of non-Māori researchers in Māori contexts was explored and suitable protocols were proposed, and implemented accordingly.

The exploration of the participation of non-Māori researchers in Kaupapa Māori research contexts was not an intended outcome of this research. However, the process became an important part of the researcher’s appreciation of the role Pākehā can have in the Māori world. A significant part of this, from the researcher’s point of view, has been a deeper development of an understanding of *tikanga Māori* through participation with the research *whānau*, and the reading required to gain an understanding of the background and context of Kaupapa Māori research. But it also involved observation of Pākehā researchers already

working in this field and critical reflection of the researcher's practice. The protocols and methods proposed in Chapter Six were the ideal the researcher was aiming for rather than claiming to have achieved that level of expertise that other Pākehā researchers have demonstrated; evident in their revered status in the Māori community. Observing and interacting in the research community with other Pākehā has raised the researcher's expectations of her own research practice.

There are two aspects of Pākehā participation in Māori research contexts that need further research. The first is to understand how and why past and present Pākehā researchers have been successful in Māori research. There must be aspects common to all these researchers that encourage respect and endorsement from the communities they work with.

The research process drew out tensions between academic ethical requirements and research conducted from within a Māori framework. The tension between confidentiality, anonymity and impartiality and concepts such as *kanohi ki te kanohi*, *kanohi kitea* (being there in person) and *manaakitanga* is neither helpful nor necessary. The two methodologies of Western research methodologies and methods and kaupapa Māori research do not need to be mutually exclusive.

Therefore, the second aspect is to look at how and if a new research methodology, specifically for Pākehā researchers in Māori contexts, could raise the expectation of Pākehā participation and lead to shared understanding of research practices, in the same way Kaupapa Māori research practices have. It could combine elements from both Western academic research traditions and Kaupapa Māori practices and validates, more explicitly, the Treaty relationship between Māori and Pākehā. The new paradigm would include key ethical principles such as informed consent, voluntary participation, openness, protection and confidentiality (Tolich 2002:165), with the respect, transparency and reciprocity expected with Kaupapa Māori practices. It would be guided by other concepts and *tikanga*, such as *tangata whenua*, *manaakitanga* and *mana*.

The research process for this project involved qualitative and quantitative data collection methods. The survey results and focus group data revealed different but, in some areas, complementary aspects of teacher and student experiences. The following are the key findings from the two sets of data:

- The student group was made up of two significant groups of learners; younger women and older men;
- The students are not using the tools to the extent that they are expected to by the teachers but are otherwise connected and confident users of the Internet and other digital resources;
- The rate of access for Māori students is higher than that of the non-Māori students;
- The distinction between younger, i.e. more confident, and older, i.e. less confident users was not significant;
- Some of the resources are used by students but there is a need to capture what makes these resources successful with learners and teachers, and to carry those success factors over to other resources;
- The focus group discussions revealed that for resources to be successfully integrated into language learning contexts *how* they are used and designed is critical in their success and this involves leadership and a clear pedagogically-driven need;
- The teaching of *te reo Māori* in the Faculty is limited primarily to beginners. Few students are progressing past the beginner level.

From the survey results, the following key recommendations are proposed⁶.

The first recommendation is increased training be implemented in the use of the digital resources for both staff and students. Both groups would benefit from training that focuses on how digital, online resources are integrated into learning programmes rather than merely a technical exercise. The training for staff needs to include the pedagogical implications of a variety of educational technologies, e.g. Smart Boards, wikis, virtual realities, and interactive learning methods, so teachers can recognise the ‘affordances’ of specific tools and methods offered in L2 learning.

The second recommendation is that there is a need to construct pedagogies that combine key elements of *tikanga Māori*, *Ako* and L2 learning and to merge these with the new pedagogies emerging with the use of educational technologies. It was clear from the teachers that the place of *tikanga Māori* within the learning and teaching of *te reo Māori* is an extremely important and intrinsic aspect of their teaching. The teaching of *te reo Māori*, whether in the

⁶ More specific recommendations for each of the digital resources are included in Appendix 1.

classroom or online, needs to be anchored in this for the language learning experience to be valid. Digital resources that support the teaching and learning of *te reo Māori* need to be based on language of a high quality, based on *Tikanga*, *Ako* and *Te Ao Hangarau*. That is, have a sound, explicit pedagogical purpose.

The final recommendation is that there is a closer examination of the Faculty's overall contribution to language revitalisation. The commitment of time, effort and money to develop online materials is only meaningful if there are learners to use them. Currently, the teaching of Māori language in the Faculty is limited primarily to beginners. This issue needs addressing and steps put in place to increase language proficiency beyond the beginner level. The lack of development of language proficiency beyond the beginner level is of concern. Further investigation is warranted into how the Faculty can contribute more significantly to the development of proficient language speakers. This may include an immersion degree similar to that in Nock's research (2006) with greater links to *mana whenua* and other *iwi* groups in Auckland.

The development of a substantial cohort of proficient speakers of Māori is the ultimate demonstration of an institution's commitment to the Treaty of Waitangi and *mana whenua*. Universities have a role to play in the revival of *te reo Māori* and Māori knowledge in this. The following quote referred directly to one university but it is applicable to Māori faculties around New Zealand in regards to their contribution to Māori language revitalisation:

...their key strength appears to be in the School's position in that it is located to engage fully with the coloniser via the university. As a result, it has the ability to lobby the university for the inclusion of *te ao Māori* at all levels...by being located within a mainstream western institution, Māori Studies departments and schools can provide the constant challenge to the idea that *mātauranga Māori* has a lesser status than Western knowledge (Timms 2007:9).

Conclusion

In the final stages of this research project, the Waitangi Tribunal took the unusual step of releasing part of the WAI 262 Claim Report before releasing its complete findings. The WAI 262 claim relates to intellectual property rights for indigenous flora and fauna, Māori language, symbols and images. The Tribunal unequivocally describes the Māori language as being in a state of "crisis", due to the steady decline in the number of native speakers and a reduction in the number of children attending Māori language education initiatives such as

Kōhanga Reo and Kura Kaupapa Māori. They were highly critical of certain Government departments (the Ministry of Education being one) for their lack of financial support of major language initiatives in the last thirty years (Waitangi Tribunal 2010). The Tribunal suggests immediate, coordinated action for the language to survive.

The Tribunal's findings are timely. Language experts and academic researchers have been expressing similar concerns about the health of the Māori language for decades (see Bauer 2008, Mātāmua 2008, Tahana 2010a). This is despite the Te Puni Kōkiri's reports claiming increases in the number of speakers of Māori (Te Puni Kōkiri 2008a).

Consequently, any research on Māori language learning, including this project, is not only concerned with quality L2 learning but ultimately with Māori language retention and revitalisation. This expectation places huge demands on the teaching staff and the production of quality Māori language resources. The ultimate success of the learning and teaching of *te reo Māori* is the degree to which it contributes to language revitalisation. Māori language teachers in the tertiary sector and the resources they use, have the dual expectation of delivering academically-rigorous content, and retaining the integrity of a threatened indigenous language, which is nothing less than the culture's link between its past and future.

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Glossary of Māori Terms

All Māori words taken from Te Aka online dictionary except where indicated

Ako	to learn, study, instruct, teach, advise
Aroha	to love, feel pity, feel concern for, feel compassion, empathise
Haka	posture dance, posture dance - vigorous dances with actions and rhythmically shouted words
Hākari	sumptuous meal, feast, banquet, gift, present, celebration, entertainment
Hapū	sub tribe, to be pregnant
Harakeke	New Zealand flax, <i>Phormium tenax</i>
He Anga e-whakaako	used in this project to refer to a model for teachers of te reo Māori to integrate digital Māori language resources in their classroom
He Anga Rangahau	used in this project to refer to research framework
Hōhā	be boring, tiresome, bored
Hui	gathering, meeting, assembly, seminar, conference
Hui whānau	family meetings
Ipurangi	Internet
Iwi	extended kinship group, tribe or nation
Kai	food
Kāinga	home, address, residence
Kaiponu	covetous person
Kākaho	stem of <i>toetoe</i> - used for lining the walls of buildings and for making kites
Kanohi-ki-te-kanohi	face to face, in person, in the flesh
Kanohi kitea	the seen face, being there in person
Kapa haka	concert party, <i>haka</i> group
Karakia	prayer, grace, blessing, service
Kaupapa	topic, policy, matter for discussion, plan, scheme, proposal, agenda, subject, programme, theme

Kaupapa Māori	research carried out using Māori values, processes and protocols
Kaupapa Pākehā	research based on values of New Zealanders
Kawa	<i>marae</i> protocol, customs of the <i>marae</i> and <i>wharenuī</i> , particularly those related to formal activities such as <i>pōwhiri</i> , speeches and <i>mihimihi</i>
Kete	basket, kit
Kiekie	<i>Freycinetia baueriana</i> ssp. <i>banksii</i> - a thick native vine
Kīngitanga	King Movement – a movement which developed in the 1850s, culminating in the anointing of Pōtatau Te Wherowhero as King. Established to stop the loss of land to the colonists, to maintain law and order and to promote traditional values and culture. Strongest support comes from the Tainui tribes. Current leader is Tūheitia Pahi.
Koha	gift, present, offering, donation, contribution
Kōhanga reo	Māori language preschools run on Maori values and customs
Koru	fold, loop coil
Kura kaupapa	Māori schools operating under Māori custom and using Māori as the medium of instruction
Mahi	to work, do perform, make
Mana	prestige, authority, control, power, influence, status, spiritual power, charisma
Mana tangata	power and status accrued through one's leadership talents, human rights, mana of people
Mana whenua	territorial rights, power from the land- power associated with possession and occupation of tribal land
Manaakitanga	hospitality, kindness
Māoritanga	Māori culture, practices and beliefs
Marae	courtyard or the open area in front of the <i>wharenuī</i> , where formal greetings and discussions take place. Often also used to mean the complex of buildings around the <i>marae</i>
Marautanga	curriculum, syllabus
Maunga	mountain

Mauri	life principle, special nature, a material symbol of a life principle, source of emotions.
Mātauranga	knowledge
Mihi	to greet, pay tribute, acknowledge, thank
Moko	Māori tattooing designs on the face or body
Noa	be free from the extensions of <i>tapu</i> , ordinary, unrestricted
Pākehā	New Zealander of European descent
Pākehātanga	New Zealand culture
Pepeha	tribal saying, proverb (especially about a tribe), set form of words, formulaic expression, figure of speech, motto, slogan
Pīngao	<i>Desmoschoenus spiralis</i> - a native plant with golden-orange,
Pūkenga	to be skilled in, skill, expertise
Pōwhiri	invitation, rituals of encounter, welcome ceremony on a marae
Rākau	stick, tree, used as a term for Cuisenaire rods with Te Ātaarangi classes
Rangahau	research
Rauemi	resource
Reo	language, speech
Rongoā	remedy, medicine
Rorohiko	computer
Tangata whenua	indigenous people of the land
Tangihanga	funeral, rites for the dead
Taonga	property, goods, possessions, effects, treasure, prized treasure
Taonga tuku iho	treasured possessions passed down from ancestors
Tapu	be sacred, prohibited, restricted, set apart, forbidden
Tauira	student, pupil, apprentice
Tauiwi	foreign people, non-Māori, foreigners, immigrants
Teina	younger brother (of a male), younger sister (of a female), cousin (of the same gender) of a junior line, junior relative
Te Aho Matua	<i>Te Aho Matua o ngā Kura Kaupapa Māori</i> is the foundation document for <i>kura kaupapa Māori</i> . It identifies principles and provides a philosophical and values base identifying the special character of <i>kura kaupapa Māori</i> (Ministry of Education 2010)

Te Ao Hangarau	used in this term to refer to a pedagogical knowledge of educational technology
Te Ao Māori	the Māori world
Te Ātaarangi	language learning course based on the use of rākau or Cuisenaire rods to assist spoken language (Te Putahi o Ātaarangi n.d)
Te Reo Māori	the Māori language
<i>Te Whanake</i>	series of Māori language resources for adult second language learners of <i>te reo Māori</i>
Tiaki	to look after, nurse, care, protect, conserve, save (computer)
Tikanga	correct procedure, custom, habit, lore, method, manner, rule, way, code, meaning, reason, plan, practice, convention
Tikanga wahine	customary practices pertaining to the female
Tino Rangatiratanga	self-determination
Tohunga	to be expert, skilled person, chosen expert, priest
Tuakana	elder brother (of a male), elder sister (of a female), cousin (of the same gender from a more senior branch of the family)
Tuitui	to lace, sew, bind
Tuhituhi	to write, draw
Tukutuku	ornamental lattice work
Tupuna	ancestors, grandparents
Turangawaewae	place where one has rights of residence and belonging through kinship and <i>whakapapa</i>
Utu	reciprocity, pay, make a response, avenge, reply, reciprocity fee, payment, salary
Waea pūkoro	mobile phone
Waiata	to sing, song, chant
Wairua	spirit, soul, quintessence
Wānanga	seminar, conference, forum
Whaikōrero	to make a formal speech, oratory, oration, formal speech-making
Whakapapa	genealogy, genealogical table, lineage, descent
Whakataukī	proverb, saying, cryptic saying, aphorism

Whakatauākī	proverb, saying, aphorism, particularly those urging a type of behaviour
Whakawhanaungatanga	relating well to others, relationship
Whānau	to be born, give birth, family, extended family
Whanaunga	relative, relation, kin, blood relation.
Whāngai	foster child, adopted child
Wharenuī	meeting house
Whare kura	school, in Māori medium education it refers specifically to secondary school level
Whenua	land, country

Glossary of English Terms

Affordances	an action that an individual can potentially perform in their environment by using a particular tool
Avatars	a computer users representation of himself/herself or alter ego
Bounce rate	the percentage of single-page visits or visits in which the person left a site from the entrance page.
CMS	Content Management System
L2	second language
LMS	Learning Management System
E-learning	shortened form of 'Electronic learning', learning that is supported and facilitated via information and communication technologies
OS	Operating System
Podcasts	digital media files available for download and then use on a digital player
Pedagogy	teaching methods, the practice of teaching
M-learning	learning where content and instruction uses mobile devices
Native speaker	someone who grew up speaking Māori, often is their first language
Podagogy	of the use of Podcasts for educational purposes or where podcasting and podcasts are integrated into teaching & learning
SDL	self directed learning
SMS	Student Management System
SPSS	the name of the analytic software used for coding and analysis of the data
Treaty of Waitangi	Treaty signed between Māori and the British crown in 1840, in New Zealand. Considered New Zealand's founding document.
Web 2	used to refer to websites that allow users to amend and contribute content to encourage collaboration between users
Wiki	websites that allows users to create, edit and change content
WVT	Wimba Voice Tool

Appendix 1: Recommendations

There are immediate changes that could be made to improve the experience of language learners and teachers. They include:

1. Increased opportunities for leadership within the teaching team for professional development and organisation of digital tools;
2. Reduced reliance on one computer suite;
3. Immediate purchase of a class set of headphones and microphones;
4. Dedicated time for Māori language students in the computer suite, timetabled around class time to increase use of them by the students.

The LMS

Major changes to LMS are needed. They are ranked in order of priority:

- A substantial re-versioning of the WVT, if not a full re- placement;
- Immediate development of system enabling staff to ‘filter’ students’ responses to assist in the marking process ;
- Integration of an online assessment process that can be accessed by both teacher and student;
- Greater emphasis on student-to-student interaction within the LMS;
- Increased internal administration responsibilities for log ins and passwords;
- Automatic archiving of previous students’ work;
- An embedded, downloadable, video demonstration of how to use the tools with a related set of written instructions for students, accessed from within the LMS;
- Removal of the need for iTunes to listen to the podcasts and integration of visual similar to the format of *Te Whanake* online;
- Greater use of visual navigation aids throughout the LMS and the WVT;
- Improved navigation path within the LMS;
- Sourcing solutions to part time students’ log in issues;
- Reducing the reliance on one type of operating system and platform.
- Inclusion of an interface in *te reo Māori*.

Te Whanake Online

The focus groups discussion and the student survey showed that *Te Whanake* online is an underutilised resource. The following recommendations are aimed at increasing student use of *Te Whanake* Online.

The following recommendations are ranked in order of priority.

1. Reorganisation of the resources within levels so users can see the full range of resources available to them;
2. Re-version and improve navigation of the Podcasts and Animations. Reduce word counts and use more visual and graphics to speed up and simplify navigation;
3. Investigate use of Web 2 features like wikis to make site more collaborative;
4. Embed specific resources from *Te Whanake* within the LMS, e.g. the podcasts.
5. Make the *Te Māhuri* and *Te Kōhure* podcasts available on the LMS;
6. Greater use of animations by linking from other pages within the website e.g. ‘resource’ of the day on *Te Aka* on the dictionary page;
7. Create profiles and ‘back stories’ of characters and contexts of the *Te Whanake* Animations to extend use of animations by L2 learners;
8. Improve links between the different resources on the website e.g. content in podcasts linked to relevant material in *Te Whanake* TV, *Tōku Reo* and the podcasts;
9. Improve navigation between the podcasts, animations and *Tōku Reo*;
10. Reduce amount of text all over the site and increase use of icons;
11. Increase cultural knowledge in explanations of each animation, including the activities and contexts of the animations.
12. *Te Aka*
 - Remove of drop downs on the *Te Aka* homepage;
 - Add ‘*kupu* of the day’ or ‘*whakataukī* of the day’;
 - Remove text-heavy introduction on *Te Aka* – replace with above;
 - Increase links to other online resources from most used parts of *Te Whanake*, e.g. the podcasts and animations;
 - Expand audio and video files to include famous people;

- Make visible the analytic features that is most searched, words added recently, how to request a word, number of words, browse feature of *Kupu Arotau* and historical data.

13. Podcasts

- Change home page to improve access;
- Improve navigation from home page.

There is a need to capitalise more on the large number of visits to *Te Aka* and to transfer this to other parts of the *Te Whanake* site.

Appendix 2

Te Whanake Timeline

www.tewhanake.maori.nz

Year	Resources	Contributors
1988	<i>Te Whanake 1: Te Kākano</i> textbook published and audio exercises produced on cassette tapes <i>Te Whanake 1: Te Kākano Pukapuka ārahi i te kaiwhakaako</i> , Teachers' manual published	Professor John Moorfield with input and guidance from respected elders who are/were fluent speakers of the Māori language. Audio exercises recorded with fluent speakers.
1989	<i>Te Whanake 2: Te Pihinga</i> textbook published and audio exercises produced on cassette tapes	Professor John Moorfield with input and guidance from respected elders who are/were fluent speakers of the Māori language. Audio exercises recorded with fluent speakers.
1992	<i>Te Whanake 3: Te Māhuri</i> textbook published and audio and video exercises produced on cassette tapes	Professor John Moorfield with input and guidance from respected elders who are/were fluent speakers of the Māori language. Audio exercises recorded with fluent speakers. Recordings of native speakers for video cassette exercises.
1993	<i>Te Whanake 1: Te Kākano Pukapuka ārahi i te kaiwhakaako</i> , 2 nd edition of Teachers' manual published <i>Te Whanake 2: Te Pihinga Pukapuka ārahi i te kaiwhakaako</i> – Teachers' manual published <i>Te Whanake 3: Te Māhuri Pukapuka ārahi i te kaiwhakaako</i> Teachers' manual published	Professor John Moorfield with input and guidance from respected elders who are/were fluent speakers of the Māori language.
1996	<i>Te Whanake 4: Te Kōhure</i> textbook published	Professor John Moorfield with input and guidance from respected elders who are/were fluent speakers of the Māori language.
2001	<i>Te Whanake 1: Te Kākano</i> 2 nd edition of textbook published <i>Te Whanake 2: Te Pihinga</i> , 2 nd edition of textbook published	Professor John Moorfield with input and guidance from respected elders who are/were fluent speakers.
2002	<i>Te Whanake 1: Te Kākano Pukapuka Tātaki</i> – Study Guide published	Professor John Moorfield with input and guidance from respected elders who are/were fluent speakers.
2003	<i>Te Whanake 2 Te Pihinga Pukapuka Tātaki</i> – Study guide published <i>Te Whanake 1: Te Kākano Pukapuka ārahi i te kaiwhakaako</i> , 3 rd edition of Study Guide published	Professor John Moorfield with input and guidance from respected elders who are/were fluent speakers.

	<p><i>Te Whanake 2: Te Pihinga Pukapuka ārahi i te kaiwhakaako</i> – 2nd edition of the Teachers’ manual published</p> <p><i>Te Whanake 3: Te Māhuri</i> , 2nd edition of textbook published</p> <p><i>Te Whanake 3: Te Māhuri Pukapuka ārahi i te kaiwhakaako</i>, 2nd edition of Teachers’ manual published</p>	
2004	<p><i>Te Whanake 4: Te Kōhure</i> , 2nd edition of textbook published and accompanying six video cassette tapes of listening comprehension produced</p> <p><i>Te Whanake 3: Te Māhuri Pukapuka Tataki</i> – Study Guide published</p>	<p>Professor John Moorfield with input and guidance from respected elders who are/were fluent speakers of the Māori language.</p> <p>Recordings of native speakers for video cassette exercises.</p>
2005	<i>Te Aka Māori-English, English-Māori Dictionary and Index</i> published	<p>Professor John Moorfield with input and guidance from respected elders who are/were fluent speakers of the Māori language.</p>
2006	<p><i>Te Aka Māori-English, English-Māori Dictionary and Index</i> website launched – www.maoridictionary.co.nz</p> <p><i>Te Whanake</i> Animations website launched – http://animations.tewhanake.maori.nz</p>	<p>Professor John Moorfield, Professor Tania Ka’ai, Professor Tania Ka’ai and a team of postgraduate students, animators and vo2 Web Design.</p>
2008	<p><i>Te Whanake</i> TV website launched – http://tv.tewhanake.maori.nz</p> <p><i>Te Whanake</i> TV Podcasts website launched – http://podcasts.tewhanake.maori.nz</p>	<p>Professor John Moorfield, vo2 Web Design, TVNZ, eCast video streaming</p> <p>Professor John Moorfield, Professor Tania Ka’ai, vo2 Web Design, Te Ipukarea and Te Ara Poutama staff members and postgraduate students, eCast video streaming</p>
2009	<p><i>Tōku Reo</i> television series launched on Māori Television</p> <p><i>Tōku Reo</i> website with follow-up activities.</p>	<p>Kura Productions, Professor John Moorfield, Te Taura Whiri i te Reo Māori and postgraduate students</p> <p>Kura Productions, vo2 Web Design.</p>
2010	<p><i>Tōku Reo</i> website to be developed to stream free online</p> <p><i>Te Aka Māori-English, English-Māori Dictionary and Index</i> compacted version for iPhone, iPad and iPod Touch. Upgraded in December 2010.</p>	<p>Kura Productions, Professor John Moorfield, vo2 Web Design, eCast video streaming</p> <p>Professor John Moorfield, vo2 Web Design</p>
2011	<p><i>Te Aka Māori-English, English-Māori Dictionary and Index</i>, 2nd edition to be published</p> <p><i>Te Aka Māori-English, English-Māori Dictionary and Index</i> offline desktop application to be developed.</p> <p>SMS text for definitions for the <i>Te Aka Māori-English, English-Māori Dictionary and Index</i> to be developed</p>	<p>Professor John Moorfield, Pearson Education</p> <p>Professor John Moorfield, vo2 Web Design</p> <p>Professor John Moorfield, vo2 Web Design</p>