



Advancing a Digital Strategy for Learning and Teaching te reo Māori

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Te Ara Poutama, the Faculty of Māori Development at AUT University, has developed a number of initiatives to enhance the teaching and learning of te reo Māori. These initiatives include a blended platform for the teaching and assessment of te reo Māori that enhances learner engagement and outcomes. Evidence is provided to support the claim that the platform and its teaching and learning practices will revolutionise the way te reo Māori, and indeed any other second language, is formally acquired.



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Background

The (New Zealand) Digital Strategy: Creating Our Digital Future (www.digitalstrategy.govt.nz) claims that 'using digital technologies to create and access our distinctive cultural content enhances our identity as New Zealanders'. The strategy also proposes finding ways to create a digital future for all New Zealanders through information and communications technology (ICT) that will enhance transform and empower communities and support their realisation of social, cultural and economic aspirations. Significantly for Māori, and also for an increasing number of New Zealanders, fluency in te reo Māori is an important characteristic of distinctive cultural identity. The contribution digital technologies play in shaping that identity is an important function of both content and access, to which the evolution of *Te Whanake* series makes a significant contribution.



The *Te Whanake* series and its digital resources are the largest single set of teaching and learning resources for the teaching of *te reo Māori*. The series contains a comprehensive set of Māori language learning resources, including four textbooks with complementary study guides, recorded audio and video listening and speaking exercises, teachers' manuals, and a Māori dictionary for learners and teachers that develops Māori language ability from beginner through to advanced levels.

The *Te Whanake*² series evolved out of the need for Māori language resources for adults that reflected modern methods of teaching second languages. Over the last thirty years considerable advances have been made in improving second language teaching methods based on an improved understanding of how languages that are additional to a first language are learnt.

The teaching methodology reflected in the *Te Whanake* textbooks and resources is based on the way learners in a natural bilingual situation learn an additional language. These textbooks and related resources are a culmination of what is now over 40 years of study by the author of developments in second and foreign language teaching methodology and bilingual education, together with the practical application of teaching Māori to secondary school pupils and adults for a similar period of time.

Considerable research has been carried out in the writing of these materials. Searching for appropriate recorded oral and written materials suitable for the developing language of the students has been a time-consuming task. Finding or creating illustrations to include as resources, some of which have been created as prompts for speaking and writing practice exercises, have been chosen or created with teaching points in mind, as well as to add interest to the written text.

Further research and checking with native speakers helped create the grammar and usage sections of each chapter. It should be noted that some aspects of grammar and usage are not to be found in other textbooks or grammars.

The authentic oral texts selected for the listening exercises were taken from Māori language programmes held in the Television New Zealand (TVNZ) archives. Careful selection required and negotiation for the use of the materials at a reasonable cost was a long and complex process. When first created these supporting resources were recorded using what were then state-of-the-art technologies. Subsequent and significant advances in digital technologies have made it necessary to reconsider the future of these resources – that challenge and how it was addressed is described below.

An Integrated Māori Language Digital Learning Strategy

An integrated Māori language digital learning strategy includes a number of initiatives to enhance the teaching and learning of *te reo Māori*. These have been developed using Apple technologies and AUT Online, the AUT Blackboard learning management system (LMS), and include:

1) Digitisation and podcasting of *Te Whanake* tapes and CDs

Reel-to-reel cassettes tapes and their recent substitutes, compact discs, have largely confined learners to expensive and immobile language laboratories. The conversion of analogue materials to digital podcasts capable of being downloaded over the internet to iTunes and then into iPods, including the addition of a visual interface, means Māori language learners are now mobile. It also means student learning is flexible in that learning *te reo Māori* is no longer confined to a formal classroom context – students can learn at their own pace and in a range of contexts. Self-directed learning is a strong feature of this technology and is encouraged through the digital publication of exercises that augment many of the resources. This helps create students who are digitally literate as well as literate in *te reo Māori*. The addition of m-Learning (mobile learning) to the pedagogy allows the content to be delivered to the students regardless of their geographical location or the time of day they access the content.

The podcasts were created using Apple GarageBand and Apple Final Cut Pro. When the artwork editing for the podcast had been completed it was loaded in an album in iPhoto, for easy access through the media browser for placement on the GarageBand podcast track. GarageBand was also used to create and edit other audio files included in the project. Audio files previously copied to a CD ROM were imported into iTunes and then converted into the appropriate format. Tagged information and artwork were then added to the file. Apple Final Cut Pro was used to address the video component of *Te Whanake* by capturing the VHS analog files and converting them into the appropriate digital format for multi-platform publishing.

As a consequence postgraduate research students are now examining ways of producing new digital resources as part of their own research to advance Māori language learning outcomes, including the production of various digital repositories and websites.

The digital resources found at www.tewhanake.Māori.nz are the largest set of free-to-access resources for the teaching of any indigenous language in the world. These resources include a digital dictionary, animations³ with self-directed learning materials, podcasts of listening and speaking activities and television drama serials⁴ to develop listening comprehension skills⁵. The resources also include *Tōku Reo*⁶, a Māori language television programme of 100 half-hour episodes for beginners. While prepared for broadcast on Māori Television, the unique feature of this series has been the concurrent development of learning exercises and additional materials related to each episode to enhance the content and learning of the programming. These are now available on-line. All these resources are underpinned by sound Māori language and second language learning and teaching methodologies. The collection provides the basis for a structured programme of study from beginner level through to advanced learners of Māori, with a variety of activities to ensure all language skills are developed. The aim is that at the end of *Te Whanake*, the learners will have achieved a reasonable level of fluency and literacy in the Māori language.

2) **The Blackboard interface** AUT Online, our university LMS, is now used for the submission and assessment of text and audio files for the *te reo Māori* exercises, thus creating a flexible learning platform. Wimba Voice is a building block within AUT Online that facilitates and promotes vocal instruction, collaboration, coaching and assessment. The Wimba Voice module – Wimba Voice Presentation – enhances the delivery of our e-learning content. This tool allows lecturers to add listening exercises and voice messages into any learning management system course page. It incorporates a small recorder and playback feature embedded in a course page to allow lecturers to verbally explain complex ideas, post assignments, and highlight important ideas that are to be discussed in future lessons. Audio clips of Māori language speakers provide students with opportunities to learn vocabulary and sharpen their listening and comprehension skills. This enhancement of our language instruction within the online environment gives lecturers the ability to easily post customised audio clips with visual images or video content. It also allows students to post their audio recordings from an internet connection anywhere in the world, meaning students are no longer confined to a single language laboratory within the university campus. Similarly, staff may now assess and return the tests and results from any internet portal in the world. Gone are the tyrannies of cassette tapes and their increasingly unsympathetic and unreliable recorders and players.

In AUT Online courses another page was created for the uploading of completed audio podcasts, enhanced visual podcasts, and video podcasts for our respective Māori language papers. Downloading the podcasts from the AUT Online course occurrence is simplified by taking the url for the podcast page and copying and pasting it into the subscription window in the Apple iTunes menu. With this content loaded into the iTunes media player library on the student computer it is just a matter of 'drag and drop' into the iPod, or indeed the iPhone (or equivalent), for mobility of the content.

Students also have access in the learning management system to other online digital resources such as Māori dictionaries, and digital learning objects to help with self-directed learning.

3) **Apple iMac hardware and software** Advances in desk-top based digital technology have allowed the decommissioning of our previous language laboratory and given additional life to our existing computing facilities. Our technology of choice is Apple iMac hardware and software with a dual boot. Windows XP and Mac OSX 10.5 operating systems are installed on each student work-station, and

additional software in the form of Apple Remote Desktop 3 is installed on the lecturer's work-station for use in a teaching context. This work-station is connected to a multimedia projector and screen at the front of the classroom to display the lecturer's desktop to the entire class.

Korg GEC3 hardware has also been integrated into the platform. The Korg GEC3 is a digital, microprocessor-based unit that interconnects to up to 32 student workstations and allows two-way digital audio communication between two or more students, as well as between one or more students and the lecturer. Using the Korg GEC3 in combination with the Apple Remote Desktop 3 software, the lecturer can hear and see what each student is doing with the student's data on their desktop. This student desktop can also be displayed from the lecturer's desktop, which has a connection to the class multimedia projector to show textual or visual information, or playback audio and video recordings to the entire class as examples of good practice.

The integration of the Korg GEC3 hardware and Apple Remote Desktop 3 software to Te Ara Poutama's existing computer lab has increased the ability of the lab so that it can now include second language tuition. This means the traditional language laboratory has now been disestablished and staff and students have been freed from the inconvenience of past and relatively expensive technology. While novel, we believe this new technology will enhance the face-to-face teaching component of our Māori language programme not replace it.

The development of an integrated Māori language digital learning strategy to enhance the teaching and learning of *te reo Māori* combined with the development of a digital platform for the teaching and learning of *te reo Māori* based on the *Te Whanake* series, increases the opportunity for *te reo Māori* as a national language to flourish because of the ease of access through ICT for learners of the Māori language. Importantly, this ease of access is a significant feature of the *Te Whanake kaupapa* (philosophy). Previously expensive resources are now free and available to Māori language learners and teachers via the internet irrespective of location. Digital publication can both enhance distribution and reduce costs, and these savings have been passed on to both learners and teachers.

Making a Difference

This digital strategy has significant advantages for learners and teachers. Of most significance has been the increased satisfaction of both groups. Student feedback shows that the new platform and resources have significantly improved their engagement and learning experience. Staff feedback indicates the platform has improved the efficiency and effectiveness of teaching and assessment. That the strategy will lead to enhanced learning outcomes is currently the subject of a research project and will be reported on in due course. Initially developed in 2006 and tested through a pilot in 2007 the digital platform is now fully commissioned and operational at AUT and available to all NZ universities and polytechnics at no cost. The primary barriers that had to be overcome were not only technological (no-one had previously done so comprehensively what we had set out to achieve) but also cultural. The creation of a digital strategy to advance the teaching and learning of *te reo Māori* was ambitious and without precedent. Fortunately both barriers have been overcome to wide student and staff acclaim.

With the convergence of telephony, mobility and access to the world-wide-web, there are increasing challenges and opportunities for educators to deliver learning resources effectively and efficiently. Opportunities for indigenous peoples to record, develop and disseminate their respective languages and cultures are also increasing.

Of greatest significance has been the opportunity to take the best from our past, our *te Reo*, which we regard as a *taonga* (treasure), and integrate it with the best of the future. We are now confident that future is a digital one.

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- Created and developed by Professor John Moorfield.
- Funded by the Tertiary Education Commission grant - ECDF *Te Whanake Online* with the copyright vested in Otago University and a license provided to AUT.
- Licenses have been provided by TVNZ to stream *Te Kākano* and *Te Kai a Te Rangatira*.
- There plans to expand the corpus to include a digital repository.
- Produced by Kura Productions Ltd, PO Box 104 124, Lincoln North Waitakere 0654, New Zealand.



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