

THE USE OF AUDIO TECHNOLOGY TO SUPPORT SECOND LANGUAGE LEARNERS OF TE REO MĀORI

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Abstract

Due to processes of colonisation, te reo Māori is currently identified as being in a state of endangerment (Reedy et al., 2011), which heightens the need for positive Māori language education outcomes. At a national level, reo Māori educators have begun incorporating technology into language classrooms to increase student engagement with the language (Heavey, 2014; McKenzie, 2014). This research evaluates a pilot study of Māori language auditory resources involving introductory to intermediate level learners of te reo Māori from Victoria University of Wellington. This study reports on the findings from a focus group of seven students enrolled in the two courses in which the podcasts were used. Findings revealed that the podcasts were positive in assisting the students' ability to audibly recognise Māori language speech. Students also highlighted a number of areas where the tasks could be improved for future students.

Keywords

te reo Māori, audio language tools, Indigenous language learning

Introduction

Māori have readily adapted new forms of technology to suit varying needs (Waitangi Tribunal, 2011). Te reo Māori has been defined

as being in a state of endangerment (Reedy et al., 2011). Colonial processes, including the exclusion of te reo Māori from schools by force (as documented in Waitangi Tribunal reports [1986]), has had an enduring impact on te reo

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Māori. There are multiple pressures on Māori language speakers and learners to ensure that exposure to te reo Māori is maximised. Given the struggles that we are facing to revitalise our language, Māori language educators urgently need to pull together our collective learnings to produce quality-assured resources that support Māori language acquisition. Collaborative teaching and research practices are necessary in the face of the linguistic pressures that te reo Māori faces in an English-dominated society. Long-standing experiences of racism—including structural, interpersonal and internalised racism—have had a lasting impact on where, why, how and when te reo Māori is spoken (Waitangi Tribunal, 1986). Ensuring that learners of te reo Māori have access to audio resources as a proxy for actual speakers is one way of supporting te reo Māori revitalisation aspirations. This study provides an example of teaching and research practices occurring at Te Kawa a Māui at Victoria University of Wellington.

The use of digital technology has been taken up in numerous educational contexts in Aotearoa. Contemporary studies have explored Māori uptake in the use of technology, including the use of social media (O’Carroll, 2013) and digitised Māori resources for adult learners (Heavey, 2014) and children (McKenzie, 2014). In addition, there is active use of Māori-English, English-Māori dictionaries and online teaching resources, such as the well-known language learning series *Te Whanake* (P. J. Keegan, Keegan, & Laws, 2011). Research to support Māori language learners’ and educators’ use of technology to enable language acquisition is becoming increasingly important in the context of language revitalisation. This appears also to be the case at a global level for Indigenous languages, which have lower levels of linguistic vitality (Hermes & King, 2013). The use of auditory recordings (such as podcasts) to support introductory to intermediate level adult Māori language learning has been relatively underexplored. The current research discloses

the results from an evaluation of a pilot study. The study includes a description of the process through which the podcasts were created, as well as feedback from the end users.

The introduction of recording voices is by no means a new technology. Māori language recordings (including those of the Mobile Disc Recording unit of the New Zealand Broadcasting Service) of native speakers (such as those of Raureti Te Huia recorded in 1947) have been invaluable in the study of pronunciations and speech patterns (Maclagan & King, 2002). With the digitisation of older recordings, these resources have the potential to assist speakers who have a high level of language comprehension by correcting their speech to achieve the goal of sounding more like native speakers, which is a goal for highly proficient learners of te reo Māori (Te Huia, 2015). Such recordings are unlikely to be as useful for introductory learners because the language used may be too advanced for those with low levels of proficiency. Native speakers who are engaged in natural speech are likely to speak at faster rates than those who are speaking at a speed aimed to assist new learners of a target language. Robin (2007) indicated that “fast delivery rates intimidate listeners and impede L2 comprehension” (p. 110), suggesting that software that slows the stream of language can be useful. In addition to the speed of the native speaker’s speech, a further challenge for introductory learners is the large number of unfamiliar language structures and the wide range of vocabulary that are often used.

Recordings of target language speech (including podcasts) that are tailored to suit the needs of the language learner group have proven to be beneficial to second language learners (Rosell-Anguilar, 2007). The language structures, vocabulary and context used in podcasts can be tailored to suit the needs of the target language learner group. Some of the noted advantages of podcasts are that they are portable, convenient to use, relatively inexpensive for both producers and users, and easily accessible to listeners

(Rosell-Anguilar, 2007). Each of these benefits are likely to aid Indigenous language revitalisation, particularly for those language groups with limited resources to support language revitalisation efforts.

With the increase in accessibility to technology, Indigenous language communities have begun adopting language learning technologies to support the task of language revitalisation (Besacier, Barnard, Karpov, & Schultz, 2013; Farfán, 2002; Hermes & King, 2013). In the case of te reo Māori, in 1998, a total of 41 websites were found, including 304 pages, where Māori language content was used (T. T. Keegan, Cunningham, & Benton, 2004). Nearly 20 years on, in 2018, a basic Google search using the term “Māori language resources” yielded approximately 15,900,000 results. This was an increase from 515,000 in 2016, merely two years previously, indicating an exponential positive trend towards the interactive use of technology to support Māori language learning. However, new learners in search of technology that is appropriate for their language level may find it difficult to sift through the multitude of potentially irrelevant online material, highlighting a need for targeted resources to be developed by course planners.

Language teaching research has increasingly focused on the impact of mobile learning, where the learner is not fixed in a permanent location or is able to utilise mobile technologies (Kukulska-Hulme, 2005). Mobile learning of te reo Māori, including the use of podcasts, has also been applied in Māori language settings (Keiha, Moorfield, Ka'ai, & Spooner, 2008). Perhaps the most prolific Māori language resources used are those of the Te Whanake series (P. J. Keegan et al., 2011; Keiha et al., 2008). These resources include textbooks as well as interactive online resources, including multiple-choice tests where students can check their basic levels of grammar. Te Whanake series also includes short videos, including voice recordings of individuals reading aloud basic grammatical sentence structures. These learning

points are also included in short skits in which speakers interchangeably use Māori and English to demonstrate how translanguaging can occur. They also provide longer passages in Māori combining a number of sentence structures. For language teachers and learners who follow the Te Whanake textbooks, the additional online support is likely to be valuable.

Medium-length passages of dialogue in te reo Māori only that focus on a specific set of structures that the student has had practice using would be useful for adult users. Such resources are commonly used in the teaching of globally dominant languages (Rosell-Anguilar, 2007), yet the impact of use of such resources is rarely reported on by Māori language educators, highlighting the need for resources to be developed (or reported on) in this area.

One of the challenges for endangered languages, such as te reo Māori, is the extent to which the languages are used. Census data indicate that the proportion of Māori who are able to converse about everyday topics decreased from 25% to 21.3% between the years 1996 and 2013 (Statistics New Zealand, 2013). With less than one in five Māori able to speak te reo Māori, and fewer than that actively using the language, the ability to develop Māori language competencies outside of the language classroom becomes increasingly difficult for Māori language learners. It may be important to understand where language learners are exposed to te reo Māori as it would increase educators' awareness about the types of language used (i.e., formal or informal, as well as the general matters of discussion) across a range of domains.

A critical factor highlighted in a number of Indigenous language communities is the ability of learners to hear authentic examples of speech (Borhani, 2012; Hermes & King, 2013). Higgins and Rewi (2014) have provided a model (Zero—Passive—Active) for understanding why some adequate, proficient and native speakers of te reo Māori choose not to use the language. While shifting speakers from

being dormant in their te reo Māori use to being active users of the language in everyday contexts may be a large task, it is possible to provide a series of audio language podcasts that, at the very least, provide meaningful examples of speech. For developers of new language learning resources, conversations that reflect real-life interactions are likely to be beneficial for the transfer of skills from a formal education setting to interpersonal communication outside of the specific learning context.

Although there are resources (including books and audio-visual material) available for children who are learning te reo Māori as either a first or a second language, there are very few adult-relevant language texts that use language structures that are not overly complex for beginner-level learners. The relevance of resources to the daily lives of a diverse group of learners is likely to influence the level of engagement from language learners.

A number of factors have the potential to prevent the uptake and use of digital technology by target users, including the Indigenous language communities' lack of access to the technology (Hermes & King, 2013). Conversely, factors supporting the uptake in use include designs that are intuitive and user friendly (Rainger, 2005; Rosell-Angular, 2007), and ensuring that users enjoy the activity (Liu, Moore, Graham, & Lee, 2003). Preferred cultural methods of learning are also likely to influence how and whether learners choose to engage with an audio language resource, and also how persistent they are in their interaction with the tools. Māori heritage language learners (learners with a whakapapa connection to te reo Māori) are likely to have differing experiences from those of second language learners of te reo Māori who do not share a heritage connection to the language. Factors may include Māori pedagogical preferences for a collective or interdependent approach to learning (Bishop, Berryman, Cavanagh, & Teddy, 2009; Bishop, Cavanagh, & Teddy, 2007). This differs from the typical cultural preferences of Pākehā, who

reportedly value individualism (Oyserman, Coon, & Kimmelmeier, 2002).

Keegan and Cunliffe (2014) stressed the importance of the role that young people have in the revitalisation of te reo Māori, indicating that due to the fast-evolving nature of technology, questions must be asked about how technologies are used to influence youth attitudes towards the use of te reo Māori. Furthermore, they stress that "if a language is seen as archaic, rural or old-fashioned, then people, especially young people, may be less inclined to use it" (Kegan & Cunliffe, 2014, p. 388). Research involving Māori students and staff at polytechnics has indicated that language educators must also become users of technology to sustain the attention of students who have been raised using digital media (Heavey, 2014). This research also demonstrated that all participants in the study actively used digitised Māori resources to improve their teaching and learning outcomes (Heavey, 2014).

One aspect that has notably impeded Māori heritage language learners' attainment of te reo Māori is language anxiety (Pohe, 2012; Te Huia, 2013). Language anxiety, a form of anxiety that occurs specifically in language learning contexts, can be debilitating for learners of second languages, as it can affect language acquisition from input through to output (MacIntyre, 1995; MacIntyre & Gardner, 1994). Research findings indicate that some Māori heritage learners may experience a heightened sense of language anxiety as a result of not wanting to be viewed by other proficient speakers of te reo as inauthentic in their cultural identity claims (Rātima, 2013; Te Huia, 2013). Māori heritage language learners have reported a tendency to feel as though they ought to be "good" language learners due to their heritage connection with the language. Failure to meet the perceived linguistic expectations of others can negatively affect Māori heritage language learners' views of themselves as Māori.

One way to mediate negative evaluations of the language learning self is through independent

(or small group) study. A review of literature of computer-assisted language learning indicated that in a number of studies, language anxiety was lower and students became more actively involved in learning when using technology (Liu et al., 2003). If computer-based learning tools are also effective for Māori language learners, this would be positive in supporting language revitalisation.

This study focuses on the development and the evaluation of auditory Māori language resources developed for beginner to intermediate level language learners who engaged with the tools over a period of 24 weeks spread across two academic trimesters. An additional goal of this study was to understand whether having increased access to examples of authentic speech through auditory podcasts was directly or indirectly linked to improved levels of language use.

Methods

Part 1: Developing the mahi whakarongo practice podcasts

To pass the two stage one Māori language courses at Victoria University of Wellington, students must listen to podcasts, transcribe what they hear in te reo Māori and then translate the Māori text into English. This pilot study involved a similar task to that of the assessment; however, there were a few variations. The students could engage with the practice auditory tasks at three levels. Students who were highly engaged in the tasks could replicate the process used during the assessment (in which they would listen to the Māori language podcast, transcribe what they heard in te reo Māori and then translate the text) as well as answer a series of three to five comprehension questions at the end of each recording. Students who were less invested in the activity could listen to the podcasts a few times only and answer the list of listening comprehension questions prior

to their tutorials. For those who did not wish to engage with the auditory resources outside of class, the podcasts were played twice again during tutorials. Those who wished to engage with the podcasts in their own time also had a copy of the transcript used in the podcast as well as the English translation (see Table 1 for an example of a script and Table 2 for an example of comprehension questions). During tutorials, students were expected to share what they heard in the sound file discussion with their peers.

The purpose of creating weekly non-assessed podcasts was to assist students to develop their auditory language skills and to prepare for their auditory language assessments. It was understood that as te reo Māori is an endangered language, the number of domains where te reo Māori might be heard incidentally might be relatively few, particularly for students who do not have whakapapa Māori. Finally, consistent with the concept of mobile learning, it was thought that the power discrepancies between the learner and the teacher could be balanced through a task that students could engage in voluntarily in physical spaces in which they were comfortable. Reducing power discrepancies in education settings has been highlighted as a positive strategy for improving Māori education (Bishop, 2003).

The podcasts were developed as part of a student summer internship programme through Victoria University of Wellington. The student interns (Nadia Collins [née Te Huia] and Te Aka Hamilton) were fourth year students aged in their early to mid twenties. Both interns were high academic achievers throughout their Māori language courses at Victoria University and were tutors of Māori language courses. Each intern was given a course workbook designed by Dr Karena Kelly, a former lecturer of the introductory level Māori language courses, who specialises in linguistics. The workbook includes sentences that the students translate during the course with examples of correct usage. The interns were informed by the lecturer

TABLE 1 Copy of a script used during MAOR102 (second trimester—week 3)

MAOR102: Focus areas include: Ehara/Kāore negation, possession

Kei te kōrero a Kīngi rātou ko Mīria, ko Amo mō tētehi konohete e haere ai rātou.

Kei te whārangi ētehi tauira o te “mā” me te “mō”. Kia kainamu atu ki ngā akoranga i te wiki tuarima o MAOR101, ka āta tirohia ēnei.

Kīngi: Ei, kāore ōku kākahu mō te konohete ā te Rāhoroi.

Mīria: He kākahu ōku mōu.

Amo: Engari he wahine koe, ehara ia i te wahine.

Mīria: Hahaha, he tungāne tōku, he kākahu ōna mō Kīngi.

Kīngi: Nē? Ko wai tō tungāne? Ko Tame?

Mīria: Kāo ehara a Tame i tōku tungāne, ko Hēmi kē [instead].

Amo: Oooh āe he tino purotu a Hēmi me ōna kākahu. Me pātai atu koe ki a ia.

Mīria: Aiii! Ehara ia i te purotu he anuheā kē ia. He nui tōna ūpoko engari he iti ōna roro.

Kīngi: Hahaha kei te pai he kākahu ōna mōku, koia te mea nui. He tīkiti ā kōrua mō te konohete?

Amo: Kāo, kāore āku tīkiti. Kāore āku moni i tēnei wā.

Mīria: Kei te pai, he hoa tōku, he tīkiti āna mā tāua.

Kīngi: Ka pai, nō reira he tīkiti ā tātou katoa. Me haere au ināianeī. Ka kite au i a kōrua āpōpō.

Amo: Āe, hei āpōpō.

Mīria: Hei konā.

TABLE 2 Listening comprehension questions following short skit

MAOR102: Wiki 1 (Pātai)

Each student is asked to answer the questions below after having listened to the audio file. The questions are asked in audio form after the script ends. The questions and answers to the questions are listed in the answer book provided to students.

- 1 When is the concert?
Hei te Rāhoroi te konohete.
- 2 Ko Tame te tungāne o Amo?
Ehara a Tame i te tungāne o Amo.
- 3 Ko wai te tungāne o Amo?
Ko Hēmi te tungāne o Amo.
- 4 Kei a wai ngā tīkiti mā Mīria rāua ko Amo?
Kei te hoa o Mīria ngā tīkiti mā Mīria rāua ko Amo.
- 5 According to Mīria, what does Hēmi look like?
He tino purotu a Hēmi.

of the course about which language structures would be taught during each of the two 12-week courses. The interns' task was to create a range of short skits in te reo Māori using the language structures and vocabulary lists that would be learned during a given week. The skits for the podcasts used language features that the students would have learned in previous weeks, but the focus of each script was to practise using a particular language structure or set of structures that were particular to the learning point of the week.

The scripts were designed to reflect authentic or natural speech as much as possible given the limited vocabulary and language structures known to the end user. Many of the scripts involved humour to maintain student engagement. Furthermore, the subjects discussed within the skits were topics that would be relevant to adult students between the ages of 18 and 35, which is the target demographic of the course. Unlike other Indigenous audio resources, such as those used by Farfán (2002), topics discussed were not overtly culturally specific, as an aim of the project was to demonstrate normalised use of te reo Māori outside of culturally specific environments, such as the marae or during ceremonial encounters.

The language features used within each of the scripts were limited to the types of structures that the students had specifically covered in the course. The inclusion of *kīwaha* and new vocabulary was deliberate within each script. Students taking the course are expected to learn between 40 and 60 new words each fortnight, and this learning is assessed. Creating the scripts required the designer to be critically conscious of each of the grammatical structures that had been taught during each of the classes. For instance, for a script that was created for week 6 of the course, the designer was able to rely on the student being familiar with the sentence structures and vocabulary that had been taught during the previous five weeks. The intended benefits of creating scripts based on existing knowledge sets available to the students were

that they were able to see how the language structures that they had learned over a short period could be meaningfully integrated into daily conversations. This approach to developing the materials also meant that learners were having their learning reinforced outside of the classroom while being able to interact with the material since it was designed specifically for their level of comprehension.

Each of the scripts specifically focused on between one and three grammar points; furthermore, any unfamiliar vocabulary was signalled on the downloadable written script for students to see. Keeping scripts simple meant that students were not overloaded with new information.

The first two scripts were created collectively (by the lecturer and the interns) to provide the interns with a shared experience of the limitations involved in writing a script with so few language structures in the beginning sessions. The first few scripts were perhaps the most challenging scripts to create with meaningful content, as a good deal of creativity was necessary to develop a story using mainly sentences beginning with the classifying “he” (e.g., he tauira ahau—I am a student) and the equative “ko” (e.g., ko ia tōku hoa—she/he is my friend) with minimal vocabulary. As the term progressed, the students eventually gained more language structures, which made it easier to create scripts that had greater variety and a cohesive storyline.

Once each of the scripts had been written, the supervisor (who was the course coordinator and lecturer) checked the scripts for grammatical accuracy and clarity of content. Furthermore, scripts were analysed to ensure that the main language focus for that week was adequately represented. The individual scripts contained a mean of 147.6 words and had a mean time of 2.30 minutes.

The sound files for the podcasts were recorded using the Audacity 2.0.2 free software with a Mac OS X version 10.9.5. The Audacity software allowed the files to be recorded and

edited without highly technical equipment and was inexpensive to use. Once recorded, stammers, stutters and mistakes made during the recordings were edited out of each of the sound files before an MP3 file was created. The voices recorded on each of the podcasts included those of the two student interns, as well as two Māori language lecturers within the department. All language speakers were proficient second language speakers of te reo Māori.

The podcasts were uploaded to Blackboard, a site used by students within the university to access information (including course notes and lecture slides) and to sit online assessments. Students were able to listen to the podcasts as many times as they wished; alternatively, students could download the files to their devices and listen to the podcasts offline.

Part 2: Evaluating the materials

Seven participants enrolled in MAOR102 (an introductory to intermediate level course in te reo Māori) at Victoria University of Wellington participated in the focus group interview. Three participants identified as female, while the remainder were male. All but two participants were of Māori descent; the other two participants were Pākehā. Six participants had also been students in MAOR101 (the course that precedes MAOR102).

Students were asked during regular class time whether they would like to participate in a focus group discussion about their experience using the practice listening tasks. Students were informed that their grades would not be affected by their decision to participate in the focus group. Students were not provided with financial incentives to participate in the focus group discussion. However, a cooked lunch was provided prior to the commencement of the focus group discussion. The sharing of food prior to the focus group interview allowed participants and the interviewer to relax in an informal way prior to the interview, as is consistent with Kaupapa Māori methodology,

which was the central methodology used for this study. Reducing the power discrepancies between the researcher and the participants (which occurs during the sharing of food) is consistent with Kaupapa Māori methods of undertaking research (Bishop & Glynn, 1999). The Victoria University of Wellington Human Ethics Committee granted approval for this study.

Interview questions were developed to assess the effectiveness of the podcasts. A focus group interview was held in the classroom where they had previously engaged in language revision activities, which was identified as a comfortable space for students. The interview was digitally recorded and was 48.24 minutes long. The focus group discussion was then transcribed and sent to focus group participants to check that the transcripts were an accurate record of the information that was shared during the discussion.

The focus group interview was analysed using thematic analysis (Braun & Clarke, 2006). The interview was listened to twice before the transcript was read. Notes were made from the transcript before specific codes were labelled using NVivo software, which supports the analysis of large quantities of qualitative data. Nodes were individually coded using terms such as frequency of language exposure, improvement of auditory language skills, difficulty with podcasts and factors supporting engagement. These nodes were then connected into clusters, which resulted in the main themes and sub-themes of this study. The Māori and non-Māori participant comments were coded concurrently; however, there was one section in which there were clear differences in the level of exposure that participants had to te reo Māori at a group level. These results were created as a subtheme.

Results

The results are divided into four major themes and report on the experiences of students who

had actively engaged with the podcasts. Overall, the findings demonstrated that Māori language was not often heard outside of class, highlighting the need for access to audio resources. Secondly, results indicated that the podcasts were useful, and were engaged with at a range of levels. The quality of some recordings and the sound of some of the native voices made a few recordings difficult to interpret. However, participants reported that their level of engagement with listening exercises had a positive impact on their auditory language abilities in the target language.

Theme 1: Assessing the need for podcast exercises—Exposure to te reo Māori outside of the Māori language classroom

Results indicated that Māori and Pākehā varied in the extent to which they heard te reo Māori spoken outside of class. Māori students discussed being exposed to te reo Māori more so than non-Māori. The results are detailed below.

Subtheme 1 of theme 1 is Māori participants' engagement with te reo Māori outside of the classroom. The types of interactions that Māori students had with te reo Māori were largely restricted to work environments or with family members. However, as introductory level learners of te reo Māori, they reported that they were unlikely to be spoken to directly or be expected to engage in full conversations. The following excerpt highlights when they would hear te reo Māori being spoken:

I probably hear it when if go to work with my dad. So sometimes he has to go on maraes [*sic*] to speak and what-not. But that's on . . . kind of . . . maybe, once every two months or once a month. (Māori, female, participant 1)

This excerpt indicates that the participant's father speaks te reo Māori and that her family may have regular contact with marae and a community where the language is used, which

is not the case for many Māori (Statistics New Zealand, 2014). Hearing the language used in cultural domains may support learners' desires to engage with learning the language if they also wish to participate in their communities.

Some participants described how they had the opportunity to use te reo Māori at their own place of work. For instance, the following participant explained:

[I usually hear te reo Māori spoken] at primary school. Other than that, just on TV or listen to the kaumātuas [*sic*] at work. [...] The people that come in ... the locals. They come there in the mornings and do their morning shopping. (Māori, male, participant 6)

Hearing te reo Māori spoken during informal contexts, such as those mentioned above, is likely to be positive for second language learners. Most participants discussed the fact that Māori Television was a central domain where they would hear te reo Māori being used, highlighting the station as a major audio-visual resource for learners of te reo Māori.

For a number of participants, schools were a central area where they heard the language spoken. This was either due to a family member being enrolled in the school or because the participants themselves were educators.

My little brother, he's fluent in te reo ... But umm, he tries to teach my nephew as well. Late afternoon, Māori at school [...] ... So, encouraging him to speak more reo ... (Māori, male, participant 7)

The excerpt above demonstrates that in a single family, the language abilities can vary considerably between family members. Furthermore, it was not always the case that language proficiency was connected with age. Younger members of the family sometimes were more proficient than older members, as demonstrated in the excerpt above.

Another subtheme of theme 1 is non-Māori

auditory exposure to te reo Māori. Non-Māori participants reported hearing te reo Māori spoken considerably less than Māori participants in this study. This is captured in the following excerpts:

Before really coming here I really haven't heard it at all. (non-Māori, female, participant 2)

I don't really hear te reo that much. Occasionally, if I flick over to the Māori television, [or] occasionally if I flick over to the Māori radio. But other than that, very little. (non-Māori, female, participant 3)

The views above highlight the importance of Māori language broadcasting for language learners of te reo Māori. The excerpt immediately above also indicates that Māori Television and Māori language radio stations are not the main stations viewed or listened to by participants outside of language classes. This point emphasises how little exposure some students have to hearing te reo Māori used in authentic situations.

Theme 2: Engaging with practice podcasts

Māori and non-Māori responses are included in this theme. The results indicated that students engaged with the podcasts interactively. Participants reported that the tasks were challenging, particularly for those raised monolingually.

The familiarity of words and sounds, [. . .] with the language we have a own way of saying sound. And so, having previously learned so much English, I have to work really hard to break down my English-listening mind to my Māori-listening mind. (Māori, male, participant 5)

The excerpt above indicates that Māori language learners are engaging in cognitive processes that

enhance their abilities to interact in two linguistic frames of mind. As some Māori heritage language learners may be learning to re-engage with their culture, resources that support Māori language acquisition are likely to be positive for the development of a secure Māori identity. Rata's (2015) research with Māori youth indicated that the ability to speak te reo Māori may allow some Māori to migrate between possible identities, which is likely to be positive for wellbeing.

Some participants in this study indicated that it was necessary to include conversations in the podcast exercises that appeared to be authentic or about normal everyday activities. For instance, one participant explained:

It was kind of good that within the kind of types of conversations that they were having were very normal. (Māori, female, participant 1)

Having "normal" dialogue in the scripts allowed participants to hear the target language being spoken informally, which participants found to be enjoyable.

The level of time taken to complete an activity varied between participants and their contrasting levels of familiarity with spoken Māori language.

It does take me at least three or four times before I'm like "ah, that's why you're saying" . . . because the listening for me is very, very difficult, but the writing is cruisy. (non-Māori, female, participant 2)

The more I listen to them, the more [I can pick up] what was being said in the conversation, [. . .] I think anything longer than [two minutes of dialogue in te reo Māori] and I'd shut off. (Māori, male, participant 5)

Auditory resources forced students to use skills that they were less confident with. Although other participants varied in the amount of time that they spent using the listening tasks,

it is worth considering the amount of effort required. For instance, balancing the amount of new vocabulary that is incorporated into a script with material that the student already knows may ensure that the student completes the task. Making sure that the script is no longer than 2 minutes was a deliberate choice to ensure that students were able to complete the task. If the task is too difficult, they may give up, which could affect their confidence or sense of achievement.

I had to go over some of them like more than once and so I get used to hearing them repeated again and again, and then writing it down and then looking at it . . . and then being like “I don’t know what this means”, and looking up words and trying to find a context. And so, that was . . . that was umm . . . good. (Māori, female, participant 1)

The excerpt above provides an example of an ideal student interaction with the audio materials. Central features of engagement included repetition of Māori language sounds, transferring the sounds into written text, using a dictionary to search for unfamiliar terms and using contextual information to make sense of the audio material. Similarly, the excerpt below outlines that it was important for the participant to be able to listen to the file repeatedly before she understood the context.

But that’s just first and second time around, the more you listen to it, you more than pick it up. But first time around, it’s umm . . . it’s not easy. (non-Māori, female, participant 3)

The excerpts above highlight the importance of having technology that allows students to play the podcasts multiple times and pause if necessary. However, some learners who have not yet mastered a new language structure or have struggled to comprehend the podcast may not necessarily benefit from repeating the audio recording, as they may be completely

unaware of how to interpret or translate the new material.

Participants commented on the difference between the types of language tasks that they were asked to complete during the course. Hermes and King (2013) highlighted the importance of vocabulary drills for language learners with lower levels of proficiency. As learners developed a wider range of language clusters, the podcast tasks allowed them to engage with their new vocabulary in ways that required deep-level processing.

In the following excerpt, F indicates a female speaker, while M indicates a male speaker. Their individual participant number follows the letter F or M.

F2 . . . ’cause I found that the mahi whakarongo is more beneficial than the kupu is. Like, ’cause I can get tested on [the vocabulary] and get 2/10, or get 10/10 depending on how much revision I have put in. But then as soon as I’ve done it, I forget them until they’re brought up in class.

M5 [The vocabulary tests are] just a cram . . . just a quick cram . . .

F2 Yep, it is. It’s definitely a quick cram. Whereas the mahi whakarongo is a little more listening, and you have to know it.

M5 You’re engaged.

F1 But the kupu list is always good to have there. But like she said you do need to . . .

M5 You walk away with structure inside of the . . . [*coughing*]

M6 You’re forced to engage in structure. That’s the difference between [mahi whakarongo], whereas [the kupu tests] is more about recall. It’s more a memory test than anything. Rather than an actual engagement with structures . . . for me, that works.

The participant discussion above demonstrates that they tended to be more engaged with the podcast exercises than the vocabulary tests. They indicated that the task forced them to engage with the learning resources in a way that promoted deeper level processing than vocabulary tests, which required a single word translation without context.

F1 At first when [I began the listening task] I used to listen to just one word. But then eventually I could then get the sentence. And I then felt really good about myself.

M6 It's a good moment aye?

F1 Yeah, like you hear a sentence, and then you can remember that sentence. And then you go . . . that was good.

M5 So then you're not listening for word to word . . . you're listening to the whole sentence going [*makes congratulatory sound*].

F3 As it gets quicker.

F1 Yeah. It's just the development of your [listening].

The excerpt above illustrates the sense of satisfaction that participants experienced from being able to observe a change in their listening comprehension skills. The friendly overlapping of input during the focus group conversation indicates that the participants were excited about the improvements to their auditory language abilities. The shifts in comprehension that they identified were the ability to recognise a whole language structure as opposed to a single word in the phrase and to comprehend speech at a faster or more natural pace.

Theme 3: Difficulties with the podcast exercises

Participants commented on a series of issues with the podcast practice tasks, including that they were not assessed, the sound quality needed improvement and the articulation of one of the speakers needed to be improved. There was also an issue related to the introduction of too many characters into a skit (as demonstrated in Table 1).

The following excerpt points out why it would be useful to have the podcast practice tasks assessed:

Because they aren't assessed and it's not compulsory. So, there are weeks where I'm like . . . too busy . . . [I] can't. (non-Māori, female, participant 2)

By having them all assessed, I would have made them a priority if I knew they were worth marks. But, because they're not, I just don't worry about them . . . and we kinda come to tutorial . . . and we do them together. (Māori, male, participant 6)

The fact that students were given a choice to engage with the practice listening tasks meant that participants with less time to dedicate to the course could disengage from the task without penalty. The tasks, therefore, require a level of intrinsic motivation (the desire to practise tasks for reasons of enjoyment, rather than being attached to an extrinsic reward, such as a grade).

The recordings for the pilot study were created in a low-budget environment (not in a recording studio), which meant that there were background noises that participants found distracting.

A lot of background noise. Like you hear a car go past and you go huh? What did you just say? (Māori, male, participant 6)

An issue that participants outlined was a difficulty in understanding the male voices, which participants felt sounded more like native speakers. This is further explained in the following excerpt:

In the exercises fluent Māori males are harder to understand, in that they flow through the language so well and comfortable in being fluent, that it all blends into one. So, you're working double time to try and break down their sentences that they've said, and sometimes I've come out with three meanings for a sentence. (Māori, male, participant 5)

Participants at the introductory to intermediate stage did not yet have the high level skills needed to differentiate words within a sentence of speakers with near-native proficiency. The style of language use made some of the podcasts difficult to follow. With this said, participants also understood that the voices used in the podcasts represented the voices of those highly proficient in te reo Māori.

M6 In saying that though, I do like [hearing the male speaker] because that's how it's gonna be . . . that's how . . .

M5 Because I wanna be him . . .

M6 Yeah exactly.

The point made is that real-life interactions may require the students to interact with individuals who sound more like the voice of the fluid male speaker than that of their teacher, who they previously had indicated sounded as if she purposefully articulates her speech to match the learners' level of comprehension. The male speaker also inspired some male learners.

The final point made was that too many characters were introduced into the storyline, which confused some of the listeners.

F5 I got a little bit lost in places. I mean

like, who was it that went to the beach? Who was it that . . . sometimes I couldn't work out who it was . . .

M3 I'm the same.

F3 yeah, either the person's voice, or they'll be talking about three people . . .

M1 And you wouldn't hear the third person 'til later.

Amendments to this series of podcasts needed to ensure that fewer characters were presented and that the character name changes remained the same throughout the series.

Theme 4: Factors that affect learners' confidence to speak te reo Māori

Subtheme 1 of theme 4 is the impact of sound files on Māori language input and output. This section focused on the impact of the listening tasks on participants' auditory and spoken language skills. The results indicated that students who engaged regularly with the listening tasks noted an improvement in their listening comprehension. In contrast, the tasks did not reportedly relate to an increase in their ability to speak the language.

My listening skills certainly went up. Especially when I hear [the tutor] speaking all the time. A lot more, I'm going "I know what she's says now and that makes a lot more sense." I see the structure when she says it. (non-Māori, female, participant 2)

The excerpt above indicates that the participants' recognition of spoken Māori language outside of the mahi whakarongo tasks improved.

Some of the difficulties in creating spoken language for learners were unrelated to their engagement with the listening tasks. For instance, the excerpts below highlight some of the issues faced by learners.

For me the listening has improved. And my basics I feel confident in, but I don't feel like I have enough kupu basically [*laughter*], basically, to hold a conversation. It's as simple as that really. (Māori, male, participant 6)

The excerpt above highlights the importance of new second language learners having a wide range of vocabulary to draw on in order to construct full sentences in te reo Māori.

One participant indicated that the listening tasks promoted discussion about the language context of the dialogue within the podcasts. Furthermore, a strategy that she applied was to work in pairs to complete the task.

Bringing [the listening tasks] to class and your tutes, and then talking to everyone else about how they did and what they did [. . .] that kinda brought like a whole kinda umm, this kinda nice . . . doing them more like a collective instead of like an individual and doing that. [. . .] I remember me and [a fellow student] once did one together and that. I found that kinda quite helpful too, like you had someone to kind of bounce back off. I don't know if many people did it together or not, but I really did like that. I think, personally with te reo Māori, it's a very . . . you work as one. It's about bringing everyone up to . . . you know? So, that's what I'd say. It'd be nice to do it in some cases as a collective. [. . .] I think that would promote us speaking te reo together a little bit more. (Māori, female, participant 1)

Similarly to other education research, some Māori participants in this research preferred a collective approach to learning. The point that was raised in the excerpt above is that for some Māori learners the goal of the individual is to raise the language abilities of the group, rather than focusing purely on the benefits that a learning task will have specifically for the individual learner. The approach noted by the Māori heritage language learner in the above

excerpt contrasts with that shown in the excerpt below from a non-Māori learner:

It didn't really help with the pronunciation. Because it is very much a solo thing. Like, you can . . . I can talk Māori to myself fine, but then as soon as it comes to like in-class situation, I don't know whether like I've not really heard it, or that I'm very concerned about saying it wrong. [. . .] quite often as well, I'm in situations where I'm the person saying te reo Māori, and I'm surrounded by . . . white people primarily. [. . .] I talk to my boyfriend, who's Māori, but he can't speak it back. [. . .] and it's quite difficult trying to speak Māori in like a public like a public space. Because it's the only real chance I actually get to do it it is . . . in class. (non-Māori, female, participant 2)

A number of points were raised in the excerpt above. First, the learner indicated that she worked individually on the task, and this was not conducive to improving pronunciation. Secondly, the participant highlighted that there are very few contexts where she can practise using the language given that her social group consists mainly of non-Māori language speakers.

Discussion

The results of this study confirmed the value of having auditory resources to support learners of te reo Māori. Similarly to the findings from Hermes and King (2013), they showed that it was important that students engaged with the resources in a way that was enjoyable. Students who actively engaged with the resources noticed a marked improvement in their ability to recognise chunks of language. Participants reported deep-level processing of information through the use of the podcast activities.

Studies of Māori language learner motivations indicate that Māori heritage language

learners are largely motivated by the need to connect with their cultural heritage and identity (Rātima, 2013; Te Huia, 2015), and learning te reo Māori as a heritage language involves sufficient levels of risk. This is particularly so for those who see their Māori cultural in-group membership as dependent on their Māori language abilities (McIntosh, 2005). The findings of this study indicate that there was little risk or anxiety associated with engaging in the activities, as they were able to complete the tasks either independently or with peers with whom they had previously developed trusting relationships.

The topics that were discussed in the podcasts were also not overtly culturally specific. Durie (2003) indicated that cultural identity insecurity can be a leading stressor for some Māori who do not have access to cultural domains. It was hoped that by creating skits that were not overtly culturally specific, Māori heritage language learners who were in the beginning stages of refamiliarising themselves with their culture would not feel that they could not recognise themselves in the scripts. However, for more advanced Māori language students, it may be useful to increase the amount of culturally specific content in the scripts in order to increase students' exposure to the values that are embedded in Māori contexts.

Gully (2011) indicated that the use of gestures and play can yield positive language outcomes for Māori language learners and that gestures are culturally specific. Gully (2011) included the use of nodding during speech interactions and the absence of pointing directly at a person as examples of gestures specific to Māori, both of which could not be captured through audio podcasts alone. Perhaps for resource developers with a higher budget than that allocated to this pilot project, it might be beneficial to test whether there is a significant difference between the experiences of learners who have access to audio-visual materials and those who are focused solely on the acquisition of sounds without visual prompting. As the podcast tasks

were only one component of language teaching in the course, it was also possible to teach through the use of gestures and interactive play during face-to-face teaching interactions. However, for courses run online without face-to-face contact, it may be essential to ensure the inclusion of body language in the additional learning resources.

The findings of the study suggest that additional audio resources can support an improvement in the ability of learners to recognise new language structures. However, this technology is unlikely to be sufficient on its own for creating high levels of language proficiency. For instance, Yashima (2009) found that second language learners who were fully engaged with a language community became active communicators and also became enculturated in the target second language community. While podcasts may not be sufficient on their own to create highly proficient target language speakers, auditory resources may contribute to the learner's transition from being unable to participate in communication due to a lack of speech recognition to a passive communicator who is able to comprehend speech.

Very practical recommendations were made by the users of these audio files. These included creating audio files that were of clear audio quality. One of the points raised was the difficulty in understanding the language used by near-native-sounding voices. While it may be preferable for learners to eventually reach a stage at which they are able to comprehend and respond to speakers of near-native language fluency, these speakers were overtly more difficult for new learners of te reo Māori to interpret. In comparison, students with higher levels of language proficiency may benefit significantly more from having audio files that include native speakers or near-native speakers. Choosing speakers who are appropriate for each speaker level is a necessary consideration for educators who may be looking to develop their own language resources. It was also important for this project to include both male and female voices

to familiarise learners with potential differences between genders.

In regard to the types of skills that educators may need to create their own resources, the findings indicated that there is a need for creative co-construction of materials. While the course lecturer was in her thirties, being able to work alongside younger writers meant that the creation of the scripts was highly relevant to the types of discussions held by many young people in their demographic. Having a lecturer who was clear about the grammar points being studied working with these creative young people allowed for a collaboration that had a positive outcome for the end user. However, as a note of caution, the younger interns should not be left to take full control of the process. It is important that a course planner who has a full overview of the grammatical structures being taught within the course guides the process of script development closely.

In addition, the number of individuals or characters introduced per script needs to be limited, as it was too difficult for learners to follow scripts that had multiple speakers being discussed, as demonstrated in the example piece in Table 1.

This particular project was fortunate to have the involvement of high-achieving young fourth year reo Māori students. It was an important goal of this project to ensure that the diverse realities of our young speaker population were represented in these series of podcasts, as recommended by Farfán (2002). Having academics or language educators working alongside highly proficient young people who are familiar with the interests of the target language learner population helps immensely in achieving the goal of creating relevant yet authentic speech.

The level of student motivation or investment in engaging with the activity also affected how much benefit could be gained from the exercises. Findings from this study indicated that Māori students' engagement in the exercise could be improved if the task was conducted in pairs or groups. This corresponded with

cultural learning preferences (Bishop et al., 2007). Students who are not highly invested in acquiring the target language may not invest in additional hours to complete the language tasks if they are not assessed. However, the spectrum of learner motivation will generally vary considerably across each cohort. Future research could investigate ways to improve students' uptake and continued use of non-assessed materials for introductory language learners of te reo Māori.

This project demonstrated that basic podcasts can support learners of an endangered language when they are meaningfully incorporated into the language course. Given the limited number of domains where endangered languages are spoken, the availability of well-designed resources to enhance language production of the target language is vital for language revitalisation.

Glossary

kaumātua	elders
Kaupapa Māori	Māori-based topic/ event/enterprise run by Māori for Māori
kīwaha	colloquialisms, slang, idioms
kupu	word, vocabulary
mahi whakarongo	listening task
marae	tribal meeting grounds
Pākehā	New Zealand European
te reo Māori	the Māori language
whakapapa	ancestry

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