

# Kōrero Kitea: Ngā hua o te whakamamatitanga

The impacts of digitised te reo archival collections

## Report and analysis of the online survey, 2016

A study conducted by Victoria University of Wellington, with support from the Alexander Turnbull Library, Wellington, New Zealand

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# 1. Introduction

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Kōrero Kitea is a research project conducted by Victoria University of Wellington, with support and contribution from the Alexander Turnbull Library. The research explores some of the ways digitised te reo collections are being used, and what impacts that use is delivering to New Zealand – to the people and communities who use digitised collections. This may help to inform the institutions that invest in digitising archival material in te reo Māori, to assist in their planning around future digitisation programmes. This paper reports on the first phase of the project, which gathered qualitative and quantitative information from an online survey conducted in April and May 2016.

The memory sector (archives, libraries, museums) has been digitising archival material for over 20 years, increasing the availability of information and thereby enhancing access for communities who are often unable to make contact with the physical archives. With online accessibility now viewed as a default service, and with digital information enabling a range of different uses, often outside of the view of the providing institution, it is necessary to shift the mechanisms by which the memory sector understands its services beyond quantitative access measures, toward assessing the use of archives and the impact that use is having on society.<sup>1</sup> Therefore, the focus of this study has been to find an indication of the uses of digitised te reo collections, and uncover some of the contextual narrative for that use.

The name ‘Kōrero Kitea’ is a reflection upon the concept of ‘kanohi kitea’ which means to have a physical presence, or literally, that your ‘face is seen’. In its original form, the phrase expresses the importance of meeting people face to face, and to be seen and known amongst Māori communities. In the title of this project, we are referring to the kōrero – or expressions of the ancestors which are present in our archival collections – being discovered by the communities that they relate most to, through the act of digitisation.

Te reo Māori is used as a case study as few things represent mātauranga Māori more than the language itself. New Zealand institutions have had key te reo archives (including 19th century newspapers and letters in Māori) available online for a number of years, and there continues to be a drive to digitise more. These collections provide an excellent opportunity for research to reflect on the impact of what has been achieved so far, in order to inform future digitisation activities and engagement between the memory sector and the users of the collections.

Additionally, the use of te reo as a case study enables this research to assess how digitisation delivers to government strategies. Through colonisation and urban shifts, traditional Māori communities and ways of cultural dissemination were severely diminished to dire levels by the 1960s.<sup>2</sup> The desire to revitalise Māori language and culture has been given impetus by grassroots organisations since the 1970s and has informed government policy since the 1980s.<sup>3</sup> Initiatives such as the establishment of Māori language early

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<sup>1</sup> Simon Tanner (2012). *Measuring the Impact of Digital Resources*, King's College London, London; Diana E. Marsh, et.al. (2015). Studying the Impact of Digitised Ethnographic Collections, *Practicing Anthropology*, 37(3); Michelle Cswell, et.al. (2016). “To Suddenly Discover Yourself Existing”, *The American Archivist*, 79(1), 56-81.

<sup>2</sup> Ranginui Walker (2004). *Ka Whawhai Tonu Mātou: Struggle Without End*, Penguin, Auckland.

<sup>3</sup> Aroha Harris (2004). *Hikoī*, Huia, Wellington, pp. 53–57.

childhood centres and schools in the 1980s, and the passing of the Māori Language Act in 1987 which established the Māori Language Commission (Te Taura Whiri i te Reo Māori), recognised the importance of te reo, not only for Māori but New Zealand generally.<sup>4</sup>

To date the study has involved an initial online survey that collected both quantitative and qualitative data to build up a picture of the use of digitised te reo collections by primary users, including how they share the collections with others. While previous studies found in the literature review (see appendix 9.2) have tended to focus on the institution, this research sought a user-focus, gathering user narratives in order to provide greater context to the quantitative data. An additional phase is currently being planned, which will follow up with survey respondents who chose to be identified and other interested parties, to further explore and test that narrative context to the findings of this survey.

A summary of the key findings is presented in section 3 following the list of key terms and definitions. The report then provides an extensive section which analyses the results of the survey in more detail. The report concludes with a discussion section on key themes and findings, including the influence of narrative on the results; whanaungatanga (relationships) supported by digitisation; how digitisation affects the wairua (spirit) of collections; and an indication of how digitisation of te reo collections provides impact to New Zealand by delivering to key government strategies.

## 2. Definition of terms<sup>5</sup>

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**Digitised te reo collections:** Historical archives (e.g., diaries, letters, newspapers) that have been reproduced digitally and are either partially or totally in te reo Māori.

**Hapū:** Subtribe.

**Hui:** Meeting or gathering.

**Iwi:** Tribe.

**Kaitiakitanga:** Guardianship.

**Kaumātua:** Elder.

**Kaupapa:** Topic, purpose or focus.

**Mana:** Relates to the power and prestige of a person or object.

**Mātauranga Māori:** Māori knowledge and Māori ways of thinking.

**Memory sector:** Libraries, archives and museums.

**Offline collections:** Digitised collections available offline, for example via USB stick.

**Online collections:** Resources available via the internet.

**Taonga:** Property, a prized possession.

**Te reo (Māori):** The Māori language.

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<sup>4</sup> Waitangi Tribunal (2011). *Ko Aotearoa Tēnei: a report into claims concerning New Zealand law and policy affecting Māori culture and identity*, Wai 262, Waitangi Tribunal report, pp. 444–449.

<sup>5</sup> Definitions of Māori terms informed by [maoridictionary.co.nz](http://maoridictionary.co.nz)

**Tino rangatiratanga:** Encompasses self-determination, sovereignty, authority, and control over taonga, resources and communities.

**Wairua:** A Māori concept that recognises the spirit imbued in people. This spirit can be transferred to things connected to those people, such as photos, oral recordings and writing.

**Whanaungatanga:** Relationship, kinship, sense of family connection.

**Wānanga:** Educational forum, lore of tribal experts, tertiary institution.

**Whānau:** Extended family.

## 3. Summary of key findings

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### 3.1 Whanaungatanga: Establishing and sustaining relationships

Whanaungatanga is defined as “relationship, kinship, sense of family connection - a relationship through shared experiences and working together which provides people with a sense of belonging. It develops as a result of kinship rights and obligations, which also serve to strengthen each member of the kin group. It also extends to others to whom one develops a close familial, friendship or reciprocal relationship”.<sup>6</sup>

This research found evidence that digitisation of te reo collections provides a significant societal impact by supporting a sharing and relationship system among communities and whānau (family). These relationships exist well beyond the bounds of the access interactions between the memory institution and their customer, and therefore beyond the traditional mechanisms of measuring and reporting on digitisation.

- Ninety-five percent of respondents shared the digitised archives they found
- Sixty percent of those shared archives were shared again by the recipient
- Sixty-seven percent liked being able to share the collection with friends & whānau
- Twenty-two of respondents sourced their digitised collections from a friend
- Seventy-six percent have used digitised collections received offline
- Twenty-five percent of respondents stated they had added digitised archives to an iwi repository
- Throughout the survey, respondents cited a sense of obligation to whānau and community members to share information found in the archive, to those to whom it related.
- *“I have shared material with people who have a right to look at such material as being from an appropriate iwi”*

This is the first time these relationships have been uncovered in archival research. However more research is required to understand the extent of this sharing system, whether it differs with digital collections, or with the use of digital collections in other cultures.

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<sup>6</sup> Definition from the Māori Dictionary: <http://maoridictionary.co.nz>. Accessed 21 September 2016.

### 3.2 Understanding the role of wairua with digitised collections

This research sought to explore the extent to which the digitisation process, and digital access and use activities affects the wairua (spirit or life force) and mana (power and prestige) of information and te reo in the collections. Generally, accessibility and ease of sharing outweighed concerns over adverse effects on wairua, with many respondents supporting open, sharable, usable digitised collections, while still providing caveats on that position.

- Ninety-three percent of respondents felt that the digitised medium is appropriate for transferring te reo and mātauranga Māori
- Ninety-three percent of respondents thought digitisation could help improve engagement with mātauranga Māori in New Zealand
- Over 80% of respondents felt more collections should be digitised, or that those collections partially digitised should be digitised in their entirety.
- Forty-four percent of respondents thought digitisation did not affect wairua, with 37% stating it did affect the wairua (though many respondents felt greater access outweighed this), while 11% thought effects on wairua depended on the information being conveyed
- *“In most cases, [digitised information] loses the wairua that the original works possessed, such as the whakapapa korero that is specific to certain whanau/hapu/iwi and would lose its significance if the information were just passed out”.*
- *“Yes, [digitisation affects the wairua of collections], but if we don’t have it somewhere we will lose that knowledge”.*
- *“I find [digitisation of te reo collections] appropriate with the caveat that institutions need to put effort into making sure users/researchers are aware of the rules for usage of the collections, and the difference between access and usage.”*

There are a complicated set of obligations and drivers to both share, use, and protect collections at the same time. Non-Western views of the use of cultural heritage are increasingly discussed within the memory sector, but it is not a well-researched topic. This research only contributes a small amount to the understanding. More work is required to understand the role the wairua plays with the management and use of digitised the reo collections.

### 3.3 Supporting significant government strategies and outcomes

This research found evidence that use of digitised te reo collections supports the intended outcomes of several key government strategies. The emphasis on understanding the impact of digitised collections to people and communities enables public institutions to draw on evidence and narrative to better tell their value proposition to their customers, stakeholders, senior leaders, and funders.

### 3.1.1. Te Rautaki Reo Māori / Māori Language Strategy

- Sixty-five percent of respondents used digitised te reo collections for language revitalisation initiatives
- Sixty-seven percent of respondents liked being able to share the collection with friends & whanau, which supports the Māori Language Strategy's result area of increasing the use of Maori language among whanau Maori & other New Zealanders, especially in the home
- There was a recurring narrative that the *"...digital collections of Māori language texts [have been] extremely valuable for developing the Te Aka online dictionary"*
- *"koinei pea taku rauemi rangahau matua mō te reo Māori o mua."* [translation: this is perhaps my main research resource for the Māori language of the past]

### 3.1.2. Ngā whakataunga tiriti / Treaty of Waitangi settlement process

- Twenty-four percent of respondents experienced an outcome of being able to contribute to a Treaty of Waitangi settlement process

### 3.1.3. Social cohesion

The New Zealand Treasury's *Living Standards Framework* outlines social cohesion as a key pillar to supporting higher living standards. Social cohesion relates to the trust between citizen and state, social inclusion in decision making, and evidence of identity and inclusion in government activities.

- Forty-nine percent of respondents experienced an outcome of personal enlightenment from use of digitised te reo collections.
- Fifty-four percent of respondents experienced an outcome of gaining family knowledge
- *"the convenience of this information has been pivotal to including some whanau in whanau decisions"*

## 4. Research method

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The online survey is the initial stage of a wider project investigating the impacts of digitised te reo collections. The project began in August 2015 with the creation of a project team, whose first task was deciding how to measure the impacts of digitised te reo collections on the community. The project team is drawn from the memory sector, and includes people involved with digitisation of collections, curation, teaching and research, and collection management. As a project investigating user impacts rather than institutional impacts, preliminary discussions with users was important in setting the parameters of the study.



Our initial premise was to focus on the impacts of a small selection of key digitised te reo collections. However, consultation with users quickly showed this was an institutional perspective and one that would not demonstrate a user-focus. The methods by which users research collections are not directed by certain collections, but are based on the information they search for. We have prioritised users over institutions and collections by shifting the focus to how and why users have chosen to research certain collections, and by gathering information on their research trajectory, from initial research to project outcomes, and how digitisation has affected their information dissemination. As a result, we will gain a more thorough grasp of impacts from use of digitised te reo collections.

Having decided to focus on the user activity and experience, we decided on ways to gather information. Because the research looks beyond measuring access to digitised collections, toward taking initial steps for understanding use and impact, we decided an online survey with ample opportunity to provide narrative would be the most suitable first approach. We will organise a hui with survey participants who indicated interest in further discussion about this research, and a small number of other interested parties.<sup>7</sup> We intend to use initial reactions to broad questions as the foundation for future research.

The online survey was conducted from 26 April through to 6 May 2016. The survey comprised 35 questions, covering seven main areas:

1. The demography of respondents
2. Types of digitised te reo collections used by respondents
3. Specific collections and providers
4. Use outcomes of digitised te reo collections
5. Sharing collections
6. Mātauranga Māori (Māori knowledge)
7. Digitised versus original collections.

Questions were workshopped by the project team to strike a balance between introducing respondents to impacts and gaining understanding of user priorities and their opinions of digitised te reo collections. Workshopped questions were also informed by previous impact assessment studies.<sup>8</sup> While simple multiple choice questions were used to introduce topics and bridge gaps in the survey flow, our survey design prioritised the seeking of narrative responses. Thus, open-ended questions were used throughout the survey. We hypothesised that this style of question best fits our impact focus and our results confirm this. We gained new, rich information from the survey that signals user impacts. Furthermore, as a study that concerns te reo and mātauranga Māori, we incorporated questions particular to te reo and Māori concepts. This included questions about the effects of digitisation on wairua and how influential digitisation is on the dissemination of mātauranga Māori.

Respondents were sourced through research, academic and iwi networks. We also asked our initial group of contacts to extend the invitation to those they thought would be

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<sup>7</sup> Contacts were collected from a secondary attachment to the survey. Responses were optional, and contacts could not be linked back to answers in the survey to maintain anonymity.

<sup>8</sup> Ka'ai-Mahuta, Rachael (2012). The Use of Digital Technology in the Preservation of Māori Song. *Te Kaharoa* 5(1); Ray Lyons (2012). Duck Soup and Library Outcome Evaluation. *Public Library Quarterly* 31(4); Tanner (2012); Diana E. Marsh et.al. (2005). Stories of Impact, *Archival Science*, 4; Roswitha Poll, (2003). Measuring Impact and Outcome of Libraries. *Performance Measurement and Metrics* 4(1); Ripeka O. Mercier, et.al. (2013). Promoting Engagement Through a Student-Built Digital Atlas of Maori Studies, in Stanaityte, Jurate. *Increasing Student Engagement and Retention Using Multimedia Technologies: Video Annotation, Multimedia Applications, Videoconferencing and Transmedia Storytelling*. Emerald Group Publishing, 121-58; State Services Commission (2013). *Kiwis Count: New Zealanders' satisfaction with public services*.

interested in the survey. We made this request because we wanted to survey those who used digitised te reo collections in a personal or community capacity, as well as academic and iwi researchers. We had a total of 83 respondents to our online survey.

We used the Qualtrics online survey platform provided by Victoria University of Wellington to construct and distribute the survey. While we were happy with the design, format and easy use of Qualtrics, we encountered a number of technical difficulties with the platform. For example, a number of respondents were unable to complete the survey because they were unable to resume the survey after partially completing it, although this option should have been available to them. This undoubtedly affected the number of completed surveys, though we were happy a number of respondents made us aware of this design flaw so we can test for these anomalies in future surveys.

Once the survey closed, results and data from multiple choice or selection questions were automatically collated by the Qualtrics platform into reports, graphs and tables. Additional to these set questions conducive to automated tabling, the survey drew narratives from respondents that required manual collation. Therefore, a number of results were collated and constructed into our own criteria and groupings, derived from respondent answers (see the overview of findings section that follows). Furthermore, because of the narrative nature of the survey, many questions were optional for respondents to answer, so rather than respondent numbers remaining the same throughout the survey, numbers varied and were generally less toward its conclusion. These factors are important to keep in mind when viewing the results.

Kaupapa Māori and Māori-centric methodology was developed by Māori academics to shift the Western view prevalent in academic research.<sup>9</sup> Some indigenous communities are understandably wary of dealing with academic and institutional approaches that provide little benefit to indigenous communities. In her master's thesis, Leonie Pihama discusses the theoretical basis of indigenous distrust in mainstream research on indigenous communities:

*... intrinsic to Kaupapa Māori theory is an analysis of existing power structures and societal inequalities. Kaupapa Māori theory therefore aligns with critical theory in the act of exposing underlying assumptions that serve to conceal the power relations that exist within society ...*<sup>10</sup>

Linda Tuhiwai-Smith's seminal work on decolonising methodologies prioritises reciprocal and long-term benefits for both indigenous groups and the knowledge created (1999). Bound into these methodologies is regular consultation and input by indigenous groups. Reciprocity is imperative in projects between indigenous groups and institutions. The literature shows that trust is built through long-term, reciprocal approaches. Smith states:

*Reporting back to the people is never ever a one-off exercise or a task that can be signed off on completion of the written report ... there was clearly a discourse which was anti-research and was very cynical about non-indigenous research ... [as an indigenous researcher] I found that people entrusted me with information about themselves ... I felt honoured by that trust, and somewhat obligated as well – in the sense of having to be very careful and very respectful about how I handled such information.*<sup>11</sup>

For indigenous communities, the stigma of being 'the other' in research presents an obstacle to researchers looking to involve themselves in indigenous knowledge acquisition. Yet, through respectful means, and genuine collaboration, more dynamic and trusted research

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<sup>9</sup> Linda Tuhiwai Smith (1999). *Decolonizing Methodologies*, Zed, London.

<sup>10</sup> Leonie Pihama (1993). *Tungia te Ururua, kia Tupu Whakaritorito te Tupu o te Harakeke*, Masters Thesis, University of Auckland, pp.57.

<sup>11</sup> Smith (1999) pp. 5 & 197.

can eventuate. We received a number of emails from respondents while the survey was live to let us know they had invited others within their networks to participate in the survey, to inform us of any problems they had accessing the survey, and also words of encouragement. This type of unprompted dialogue shows a level of interest not often experienced through online surveys and is encouraging for the longevity of the project. Kaupapa Māori fits well with our commitment to understanding impact and our user-focus.

Some respondents answered in te reo as is expected for a study concerning te reo resources. These responses were translated by a team member and te reo responses quoted in this report are quoted in te reo first, followed by an English translation.

#### 4.1. Impact assessment methodology

As part of the Kōrero Kitea project we looked to contribute to impact assessment methodology.<sup>12</sup> The following details the key drivers in our impact assessment design:

##### **1. Narrative**

- a. As an assessment that requires a deeper understanding than what can be garnered from access statistics, narrative is able to draw out complex impacts from users themselves.

##### **2. Commitment to understanding impact**

- a. Because of the narrative nature of this impact assessment methodology, long-term studies are most useful to ascertain meaningful data. A long-term study means that broader themes will become more apparent through research and that interpretation of narrative-style assessment will improve over time.
- b. Because of the newness of impact assessment we initiated our research with this online survey. Further research is necessary to gain better understanding of impacts of digitised te reo collections. We propose that hui with participants from the online survey through focus groups and interviews will help our commitment to understanding impact. We feel this multi-layered approach is suitable for impact assessment generally.

##### **3. User-focus**

- a. While a number of previous impact studies have been conducted within institutions via interviews with library and information management staff, our impact assessment focuses on user impacts of digitised te reo collections – a shift initiated through consultation with users prior to our data collection design.

##### **4. Understanding the respondents**

- a. This is imperative, particularly for studies conducted within culturally-specific groups. For this project concerning te reo and mātauranga Māori, using culturally-appropriate methods such as those set out in kaupapa Māori methodology was important to validate the project and for it to make sense

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<sup>12</sup> Lyons (2012), Tanner (2012), Poll (2003).

to participants. Consultation, user-focus, narrative and use of te reo reflect desires to be responsive to understanding respondents.

- b. As a project concerning te reo Māori, we want participants to be comfortable and able to use te reo. A number of respondents to the online survey answered in te reo. For further focus groups and interviews, we will have reo speakers involved from within the project team in the event that participants choose to speak and write in te reo.

## 5. Overview of findings

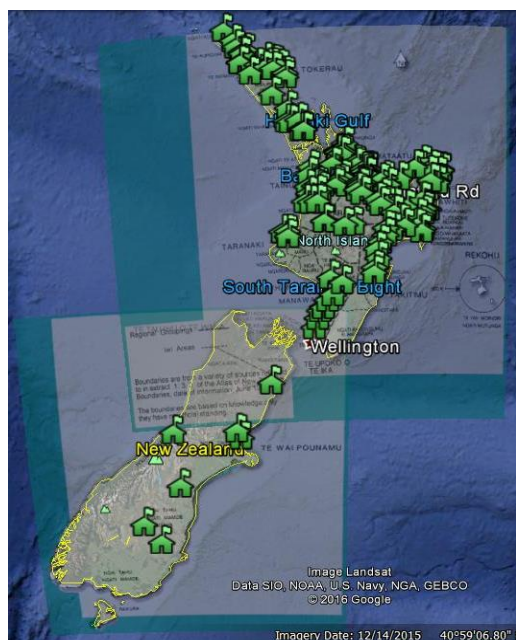
### 5.1. Demographics of respondents

#### 5.1.1. Ethnicity and residence

The first section of the survey concerned the demographics of respondents. These questions were optional. Given that the survey was anonymous, it was important that respondents felt they did not have to provide personal information, however response rates were high for these questions.

Most of the 73 respondents who answered question 1 concerning ethnicity identified as Māori and shared their iwi, while 8% identified as Māori but did not share their iwi.<sup>13</sup> Of the remainder of respondents, 15% identified as Pākehā, 1% Scottish, and 1% British.

Figure 1 illustrates the general distribution of the iwi affiliations of respondents and table 1 gives the percentages of iwi affiliation areas (question 2). Question 3 of the survey asked respondents where they currently reside. Out of the 80 respondents who answered this question, a quarter reside in the Wellington region, while most of the remaining respondents live in New Zealand's other main centres (Auckland, Hamilton, Dunedin and Christchurch). Notably, there were respondents located in Australia also. While place of residence is important in order to understand levels of access to original repositories, we must be aware that even those more able to access original collections may prefer digitised formats.



Iwi affiliation area (49 responses)	%
Central North Island	36%
Northern North Island	25%
Eastern North Island	25%
Southern North Island	7%
South Island	5%
Western North Island	2%

Figure 1: Map of general iwi location of respondents

Table 1: Iwi affiliation area

<sup>13</sup> See appendix 9.1 for the full questionnaire.

### 5.1.2. Occupation(s) of respondents

Seventy-eight respondents answered question 4, which asked about occupational activities. Rather than providing possible answers to select from, we left responses open. Occupations can be suggestive of types and purposes of research that respondents carry out. In figure 2, we collated occupations into our own groupings, based on the occupations provided by respondents.

A high proportion of respondents work in education and within the memory sector. A number of respondents had multiple roles, particularly those answering in te reo such as this multi-layered response:

*Poutakawaenga whakangungu, kaiako, kaiwhakataki, ringa tārai rauemi, kaituhituhi*  
[translation: Training coordinator, teacher, broadcaster, resource developer, writer].<sup>14</sup>

Of note were the iwi and community roles listed in addition to another occupational activity. This shows that respondents may have multiple reasons for using digitised te reo collections, i.e., for both professional and personal use.

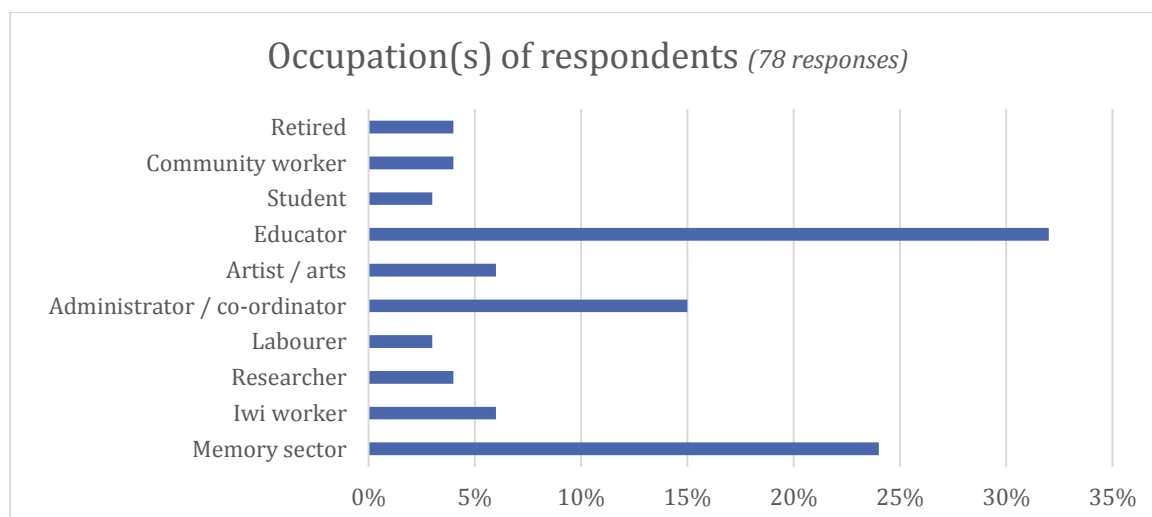


Figure 2: Occupation(s) of respondents

## 5.2. Types of digitised te reo collections

### 5.2.1. Digitisation

Nearly three-quarters of the 81 respondents to question 5 had used digitised te reo collections (73%). The 27% of respondents who answered no to having used digitised te reo collections were asked to answer question 6, enquiring why they had never used digitised te reo collections before. Their responses indicate that digitised te reo collections are still difficult to find and people who may be interested in them do not know about them, or do not know how to use them (see table 2).

<sup>14</sup> Any responses in this report are direct quotes, including spelling, of the respondent.

<b>Why have you not used digitised te reo collections?</b> <i>(31 answered)</i>	<b>%</b>
I never came across any digitised te reo collections	63%
I am not proficient enough in te reo	47%
I was unsure if it was appropriate for me to use them	11%
I prefer using original collections	11%
Other (please specify)	31%

**Table 2: Why respondents had not used digital te reo collections before**

Other responses given additionally to those set out in question 6 included:

*Had no reason to use them to date.*

*Need to know more about it.*

*I am not proficient enough in digital technology.*

*Didn't know they existed.*

### 5.2.2. Online and offline digitised collections

The use of both online and offline digitised te reo collections is relevant to this research because it indicates how knowledge is dispersed and can also help gauge what modes of information transference are beneficial to researchers. Most of the 58 respondents to question 8 of the survey had used both online and offline digitised te reo collections (71%). Of the remainder, 24% had solely used online digitised te reo collections, while 5% had only found them offline. Lesser offline use may indicate a level of comfort and trust with sharing collections online, or that offline resources are more difficult to source than online resources, with access often requiring a relationship with collection providers.

Respondents were asked further about online and offline use in questions 9 and 10. They were given statements to select from, as well as space for specific answers. With these questions, we wanted to tease out how respondents prefer to research and ways that digitisation aids research processes. Question 9 asked what respondents liked about digitised online collections, while in question 10, they were asked what they liked about digitised offline collections. Responses were lower concerning offline use in question 10 (40 respondents) compared to online use in question 9 (49 respondents), indicative of the greater use of online digitised te reo collections. While many statements reached into 70 and 80 percentiles in question 9, the highest response to a statement in question 10 was 60% (see figure 3).

Accessibility, ability to revisit collections, and being able to view a range of digitised te reo collections from around the country, were benefits of online collections indicated by over 80% of respondents. Being able to revisit collections was viewed as the greatest advantage of offline digitised te reo collections by 60% of respondents. 16% of respondents offered other advantages they have found with online collections, and 23% for offline collections. The following responses are indicative of responses in this section:

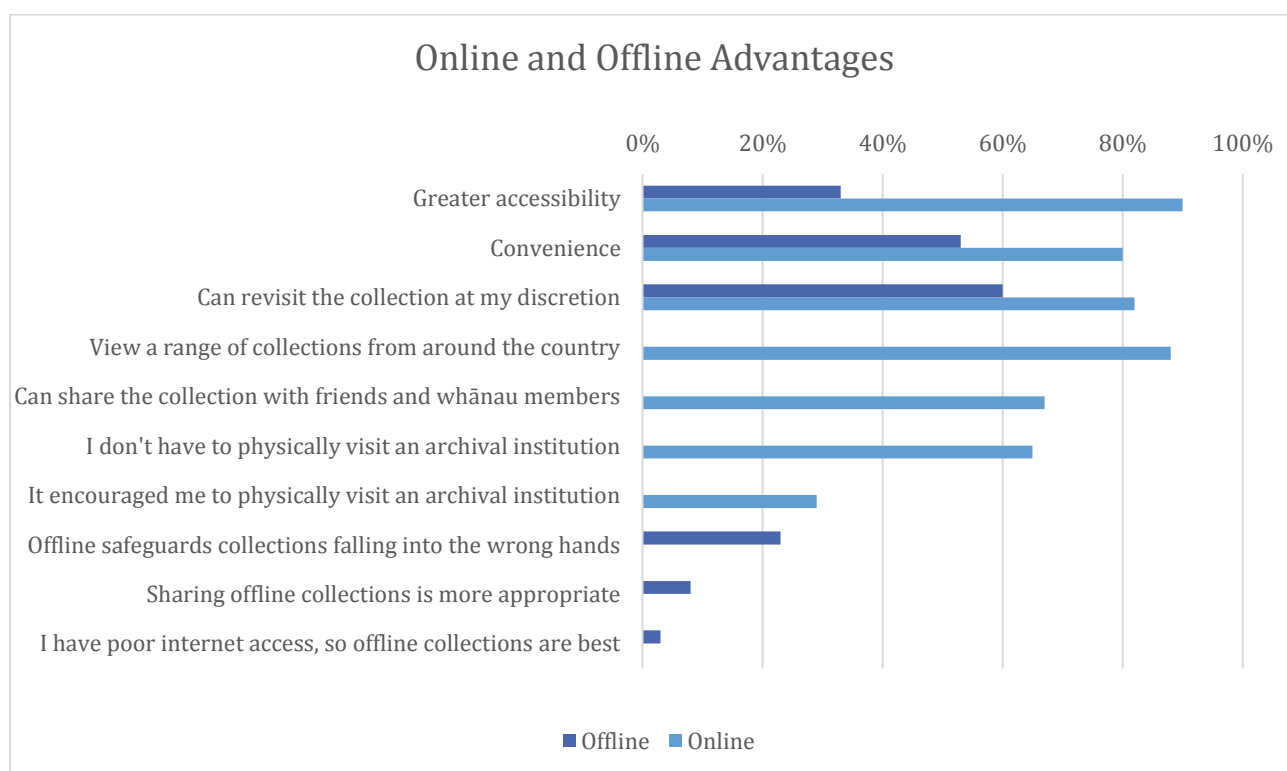
*Due to time and budgetary constraints, travel is not always possible. Online collections mean that I can manage more research in the timeframes.*

*Ultimately, I feel online is the way to go. Offline only means the resources are available to those who have the time and resources to engage the collection host. In some ways it keeps the information safe, however, to me, the greater negative is that the information is gate kept.*

*[Preference] depend[s] on the sensitivity of the material – not all material should have open access to the wider public.*

Many respondents have found online collections are convenient, cost-effective and easily accessible. While there are similar advantages to having online and offline access, some respondents mentioned benefits particular to offline digitised collections: the safe-keeping of sensitive information and having greater control over who can view collections; as one respondent states:

*I appreciate that some collections are confidential to different communities so respect the need for a great degree of control in relation to accessibility. Horsesh for courses, offline for localised taonga (whānau/whakapapa), online for bread and butter (how-tos, practice exercises, readings and public addresses).*



**Figure 3: Advantages of online and offline digitised te reo collections**

Question 11 rounded off this section (see table 3) and illustrates what was suggested in questions 9 and 10; that online collections are preferred by respondents over digitised offline collections. However, a number of respondents were unaware of digitised offline collections, so preferences reflect this. Sixty-five percent of respondents preferred digitised collections online, while only 17% preferred offline. This suggests that there is a desire for te reo collections to be widely available, and while concern over sensitive material is present in the surveyed population, it is not significant enough for offline collections to be preferred over online collections.



<b>Do you prefer digitised te reo collections to be online or offline? (47 responses)</b>	<b>%</b>
Online	65%
Offline	17%
No preference	10%
Kanohi ki te kanohi (face to face)	2%
Depends on the material	2%

**Table 3: Preference of online and offline collections**

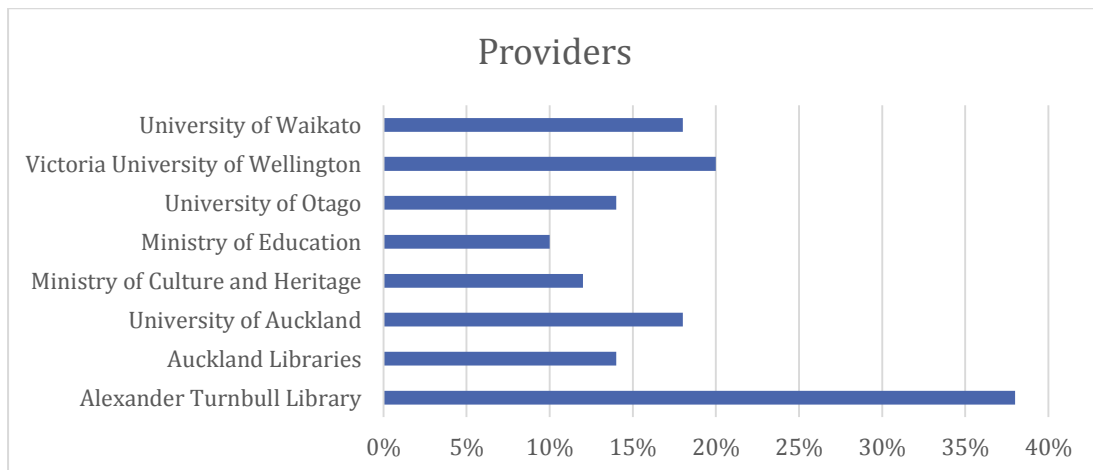
### 5.3. Specific providers and collections

#### 5.3.1 Providers

The memory sector were the largest providers of digitised te reo collections to the 50 respondents who answered question 12 of the survey (78%, see table 4). Respondents were initially asked to select what type of providers they had used (for example providers in the memory sector) and then to further name specific providers of the digitised te reo collections they had used (for example Alexander Turnbull Library). Figure 4 shows specific providers who were most used by respondents to obtain digitised te reo collections.

<b>Type of provider (50 responses)</b>	<b>%</b>
Memory sector	78%
Education sector	66%
A family member	36%
Iwi and other Māori groups	28%
Government departments	24%
A friend	22%
Other	8%
Unsure	2%

**Table 4: Digitised te reo collections providers**



**Figure 4: Providers used by respondents**

Of note is the number of iwi and Māori groups who have provided digitised te reo collections. Data on iwi and Māori providers of digitised collections is not easily accessible so this insight is an important result of the survey. The list in table 5 provides a glimpse of some Māori groups who provide digitised te reo collections. The list also suggests possible networks respondents interact with to search for and share information, such as iwi networks. Indeed, most Māori group providers were iwi organisations, although media organisations like Māori Television and Te Upoko o te Ika Radio were also named as digitised te reo collection providers respondents had used.

<b>List of iwi and Māori group providers</b>	
Hauraki Māori Trust Board	Ngāi Tāmanuhiri
Māori Television	Ngāti Toa Rangatira
Ngāpuhi	Papakupu ā-iwi
Ngāti Porou	Raukawa Charitable Trust
Te Rūnanga o Ngāi Tahu	Te Upoko o te Ika Radio
Te Rūnanga o Ngāti Awa	Tūhoe

**Table 5: List of iwi and Māori group providers**

The survey also asked if respondents felt their relationship with collection providers had changed due to their use of digitised te reo collections (table 6). Our interest in asking about relationships with providers was to see if digitisation has had any impact on the trust between providers and users. The hypothesis is that narrative supporting positively changed relationships provides a positive impact for digitisation. . Almost half of the respondents who answered this question reported that their relationships with providers was enhanced through accessing digitised te reo collections. By asking respondents to explain their reasoning, we were able to glean some key insights into provider-user relationships. For some, digitised te reo collections increased awareness of the collections held by institutions and other resources in their stores beyond those that have been digitised to date:

*We became more aware of the material stored at these institutions and the many ways they can help us with our research projects and activities.*

For others, specific collections connected respondents to the collection provider:

*I have developed a close relationship with the staff of the Sir George Grey Special Collections at the Auckland Public Library.*

In some cases relationships were not affected:

*No, the experience did not change the relationship.*

Importantly, there were no negatively changed relationships resulting from use of digitised te reo collections. This is an important finding, as the nature of digitised collections means the relationship between user and provider lacks human interaction and so the health of the relationship can be difficult to ascertain.

<b>Relationship with digitised te reo collections providers (20 responses)</b>	<b>%</b>
Yes (closer / enhanced)	47%
No	41%
More aware of collections	6%
Shows provider commitment to Māori	6%

**Table 6: Relationship with digitised te reo collections provider**

### 5.3.2. Specific collections

Respondents were given a set of digitised te reo collections to select from and space to provide additional collections they had used (table 7). The most-used digitised collections included: Te Ara, the Journal of the Polynesian Society, Te Ao Hou, Papers Past and Māori Land Online. These collections tend to be contained within systems that are more easily accessible and promoted. Out of the total of 50 respondents, 16% named collections additional to those listed in the survey. Other collections mentioned included the Dixon collection at the State Library of NSW; tewehinui.com; the unbound bible; Wakareo; the Ngata Dictionary; Te Aka Dictionary; Te Taura Whiri i te Reo Māori; Papatupu Block Committee Minute Books; Kahungunu Matangi Rau; Te Karaka; tki.org.nz; and Crown Forestry Rental Trust research documents.

<b>Digitised te reo collections used (50 responses)</b>	<b>%</b>
Te Ara: The Encyclopedia of New Zealand	86%
The Journal of the Polynesian Society (University of Auckland)	78%
Te Ao Hou (Alexander Turnbull Library)	74%
Māori Land Online (Māori Land Court)	72%
Papers Past (Alexander Turnbull Library)	72%
Niupepa (Waikato University)	64%
New Zealand Electronic Text Centre (Victoria University of Wellington)	62%
Grey New Zealand Māori Manuscripts – Ngā Tuhinga Māori (Auckland Libraries)	44%
Māori Land Court Records (offline)	40%
Eldson Best Collection (the Knowledge Basket)	40%
Appendix to the Journals of the House of Representatives (Alexander Turnbull Library)	38%
Sir Donald McLean Collection (Alexander Turnbull Library)	32%
He Tirohanga ki Muri (Hocken Collections, Otago University)	24%
The Legal Māori Resource Hub (Victoria University of Wellington)	22%
Te Kawa a Māui Atlas (Victoria University of Wellington)	18%
Hauraki Digital Archive (Hauraki Māori Trust Board)	4%
Hokianga Online Exhibition (Auckland Libraries)	2%

**Table 7: Digitised te reo collections used by respondents**

### 5.4. Purpose and outcomes

### 5.4.1. Purpose of use

There were a number of types of projects that respondents conducted using digitised te reo collections, including education, work and whakapapa research (question 14, 35 respondents). The purposes for using digitised te reo collections centred around education and revitalisation of te reo (question 18, 37 respondents). Both sets of data show that education, of self and others, is important to respondents. The answers for these two questions mirrored one another. This is significant because it shows that project types and purposes have synergy. While project types were open to respondent interpretation, unprompted by the survey, answers given for the purpose of use were derived from a set list of possible responses.

### 5.4.2. Outcomes

In question 19, respondents were given a selection of research outcomes to choose from (figure 7). This question was seeking knowledge of how digitised te reo collections were being used practically, and to discover any flow-on effects of use. Sharing knowledge and producing new work were all high outcomes for respondents. Interestingly, research continues for over half of the 37 respondents who answered this question indicating more collections may be used in the future or that collections used have provided further avenues for research. All respondents indicated that the availability of digitised te reo collections had improved their research process (question 32 of the online survey), with half of respondents recognising digitised te reo collections as very important to their research processes.

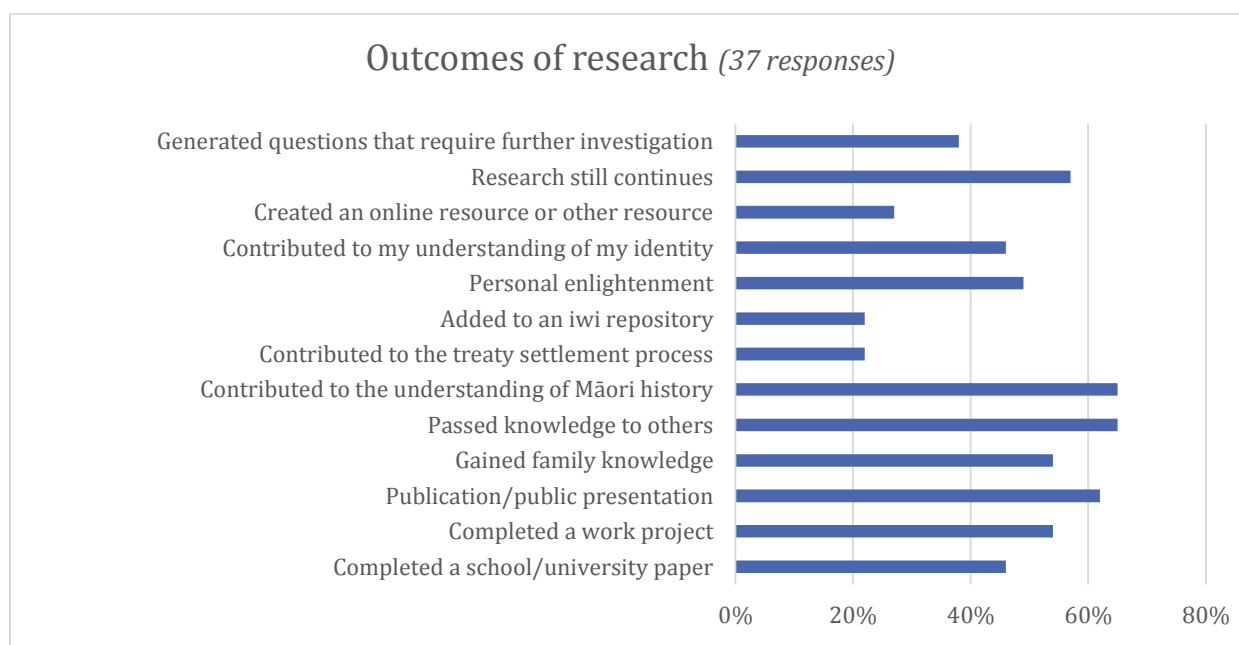


Figure 7: Outcomes of research

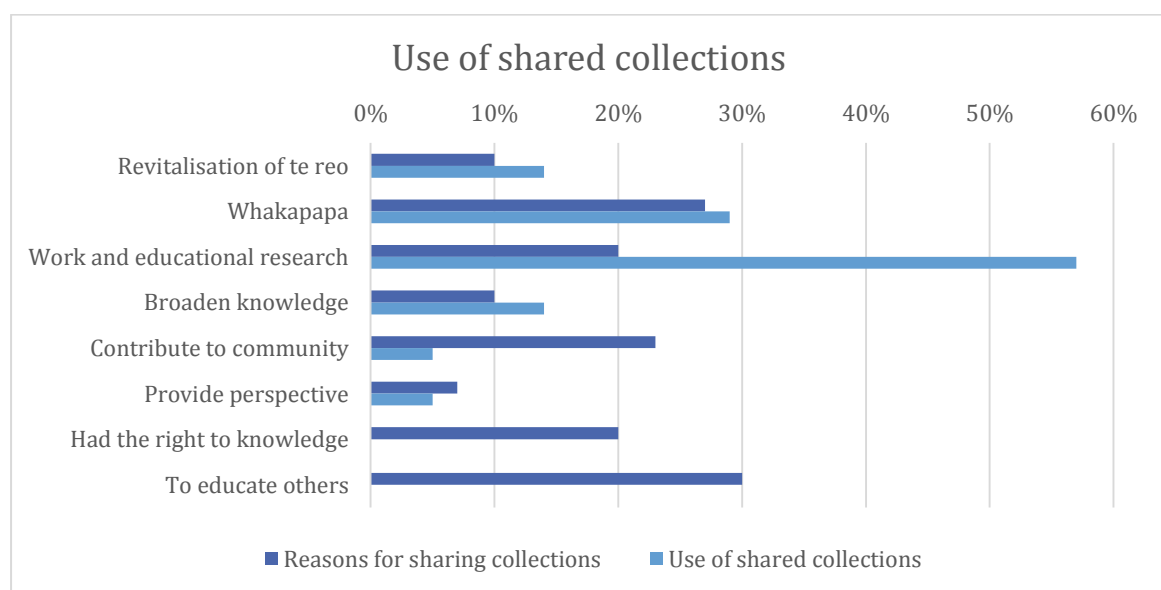
### 5.5. Sharing collections

We asked a number of questions related to sharing collections in order to evaluate how digitisation impacts upon information dissemination. Understanding the extent to which

digitised collections are shared, provides insight into the life of the items beyond the use by the primary researcher who accessed the items from a provider, and indicates an influence and impact on a wider community or network of users. Nearly all respondents shared digitised te reo collections they had used (95%). Of those respondents who said they shared the digitised te reo collections they used, 60% knew what those shared digitised te reo collections were used for. The study shows that users have taken advantage of the ease with which digitised collections can be shared. This is an important finding for assessing the wider impacts of digitised te reo collections.

The purposes of secondary uses of digitised collections were varied. Over half of respondents said shared digitised te reo collections were used for work or educational research, while 30% were used to research whakapapa. These purposes are similar to the research purposes of those who shared collections (see purposes and outcomes in the previous section), so it may be possible for future research to better understand this secondary and tertiary use, in order to ascertain a ‘multiplier effect’ of initial use of digitised collections.

In question 24, respondents were asked why they chose to share digitised te reo collections. This question further contributes to the picture we are building of the impacts of digitised te reo collection on the wider community. The reasons given for sharing information highlight the drivers for researchers. Answers showed respondents felt a responsibility to pass on the knowledge they had found because the information related to whānau, their whakapapa, or work. There was a sense that others had a right to this knowledge. This reflects peoples’ motivations for conducting research and for what purposes, particularly within a Māori context. As one respondent states, ‘the convenience of this information has been pivotal to including some whānau in whānau decisions’. These comments are in line with the Official Information Act (1982) that prioritises that archival institutions make information available to researchers,<sup>15</sup> and digitisation has aided this. Figure 8 compares answers to both what collections were used for and why collections were shared. Again, work, education and whakapapa research were important factors.



<sup>15</sup> Waitangi Tribunal (2011), pp.529.

**Figure 8: Use of shared digitised te reo collections**

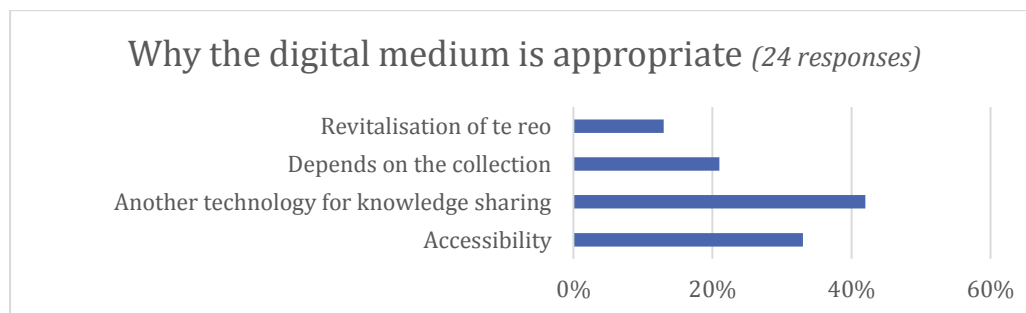
## 5.6. Mātauranga Māori and the digital realm

### 5.6.1. Mātauranga Māori

As a study concerning te reo, it was appropriate to investigate how users felt about using historical te reo documents reproduced in digital form. The development and use of te reo has become more topical in recent decades, particularly with legislation aimed to revitalise te reo Māori and the Wai 262 Waitangi Tribunal claim that looks deeply into Māori rights to language and other taonga.<sup>16</sup>

The vast majority of respondents to question 25 found the digital medium appropriate in transferring te reo and other mātauranga Māori. None found it an inappropriate medium, however approximately 15% of the 35 respondents who answered this question were unsure of the appropriateness of digitising Māori material.

Question 26 furthered this enquiry and asked why respondents found the digital medium appropriate in transferring te reo and other mātauranga Māori (figure 9). Twenty-four respondents offered answers to this question. Just under half (42%) viewed digitisation as another technology to help disseminate knowledge, in addition to written, photographic, pictorial and oral resources. This view was also mirrored in the literature informing this project (Ka'ai-Mahuta 2012).



**Figure 9: Why the digital medium is appropriate**

In question 34 we enquired about whether respondents felt the availability of digitised te reo collections made it more possible for New Zealanders to better engage with mātauranga Māori (see table 8). The vast majority of the 29 respondents who answered this question felt digitisation made it more possible for New Zealanders to better engage with mātauranga Māori (93%). Nearly half of the respondents who answered in the affirmative attributed this improvement to the increased access digitisation has created. This signals that digitisation has positively impacted on the dissemination of mātauranga Māori, with the potential for nationwide influence.

<sup>16</sup> Waitangi Tribunal (2011).

<b>Engagement with mātauranga Māori (29 responses)</b>	<b>%</b>
Yes	48%
Yes, specifically because of increased access	45%
Unsure	7%
No	0%

**Table 8: Improved engagement with mātauranga Māori**

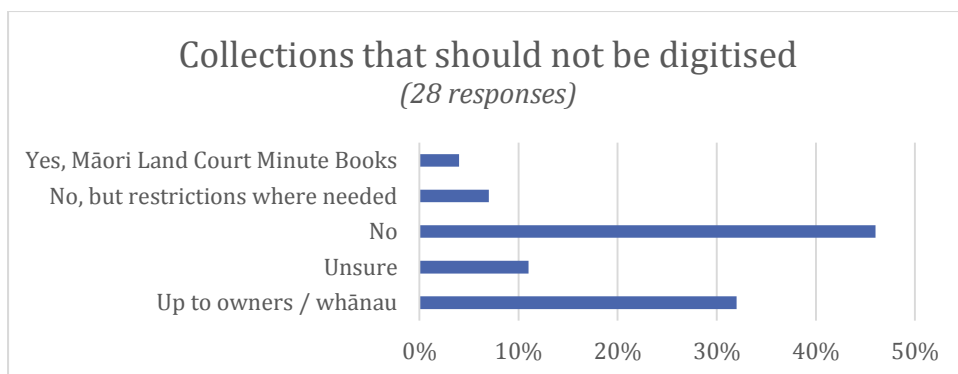
Respondents were asked if there were any collections they thought should or should not be digitised in questions 16 and 17 of the survey (see figures 11 and 12). While responses were largely positive about what has been digitised and the formats used, some indicated that systems should be put in place to protect sensitive information in the context of mātauranga Māori:

*I think all reo collections should be digitised unless the collection has restrictions on access.*

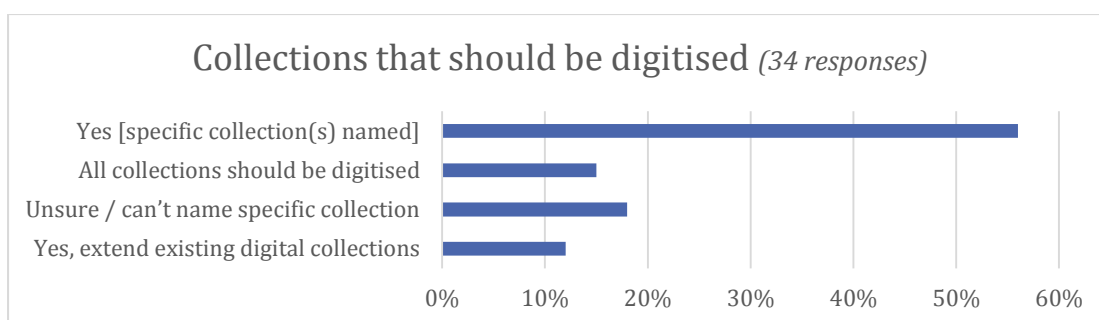
*All te reo collections should be digitised but they do not need to be made publicly available. This would help with preservation.*

*Kua tōmuri pea tēnei pātai. Heoi, kei ngā whānau o te kaituhi te tikanga, mehemea he tuhinga nā tō rātou tipuna. Atu i tēnei, he pai kia whakawātea i ngā kōrero o tērā atu rautau hei āwhina i ngā tāngata ki te rangahau i tāna e hiahia ana [translation: It is perhaps a bit late for this question. However, it should be up to the whānau of the writer to decide, if it is something their tipuna wrote. Apart from that, it is fine to open up resources from the past to help people to research what they are interested in.]*

These quotes illustrate that digitisation is largely viewed in a positive light. Indeed, 82% of respondents desired more collections to be digitised or existing digitised te reo collections be reproduced in their entirety (figure 12). However, controls over access were suggested by some respondents to alleviate concerns around the digitisation, and therefore greater accessibility, of sensitive information, such as access requiring the permission of the curator Māori, or allowing offline access only. Importantly, this shows an understanding that digitisation does not always equate to unlimited access, but can contribute to preservation and longevity of collections, while still enabling transference of knowledge in a controlled way. Comments made by some respondents also indicate a level of trust that collections are being managed in a way that respects the information and those connected to it. That 32% of respondents (figure 10) thought the decision to digitise or not should rest with owners or whānau to which information belongs, and not the memory sector providers, suggests there's still some lack of trust in institutions to be able to make appropriate digitisation decisions alone, without appropriate consultation. It also reflects the concept of 'Kaitiakitanga' and that the appropriate kaitiaki community has an ongoing interest in protecting mātauranga pertinent to them, through their whakapapa connection to the knowledge held within particular collections. In this sense the people with a strong whakapapa connection to the collections are deemed as 'owners' because of the cultural obligations that come with that connection, as opposed to 'ownership' in a legal sense of the word.



**Figure 10: Te reo collections that should not be digitised**



**Figure 11: Te reo collections that should be digitised**

### 5.6.2. Wairua

Question 27 of the survey asked whether digitisation of te reo affected the wairua (spirit) of te reo and mātauranga Māori conveyed in collections. Twenty-seven respondents offered their opinions. Responses were fairly equal concerning whether wairua was affected by digitisation with 'no's being slightly higher (table 9).

<b>Effects of digitisation on wairua (27 responses)</b>	<b>%</b>
No	45%
Yes	37%
Depends on information being conveyed	11%
Unsure	8%

**Table 9: Effects of digitiation on wairua**

Individual comments from respondents illustrate how digitisation is viewed by some users of mātauranga Māori collections. Respondents stated:

*We have to accept, and embrace, that we no longer live in an exclusively oral society ... writing was an early technology used to capture and record te reo Māori. Audio recording was another. These technologies have created taonga that it is our responsibility to make available to succeeding generations or else the knowledge they convey will lie dormant and undiscovered, gathering dust in institutions.*



*I think digitising can lose some of the wairua you could get from learning the same information from a kaumātua. Heoi [however] ... at least online it is available for anyone looking for it, and for future generations.*

*I think the wairua remains with the original document. The reality is that these days whānau Māori are spread all over the world.*

*I feel there will always be varying levels of wairua experienced, depending on the intimacy or otherwise of the user with the material and/or the contributor and/or the medium.*

*No. There is no real difference between seeing text on paper, or on screen.*

While there is some recognition of the effects digitisation has on the wairua of collections, respondents acknowledge the benefits of digitisation and particularly how digitisation can help preserve information for future use.

## 5.7. Digitised versus original collections

In questions 30 and 31 we enquired about digitised or original collection preferences. In question 30 respondents were asked whether they felt it necessary to view original sources in addition to digitised te reo collections they had used (table 10). This question can indicate the level of use of digitised te reo collections compared to original formats. It establishes whether digitised collections are used as an initial entry point to information before viewing original items, or whether digitised collections are used as a sole resource. While 46% thought that the necessity to view original sources depended on the collections, 29% did not think it necessary, while 17% of respondents did find it necessary to view original sources.

<b>Is it necessary to view original collections? (35 responses)</b>	<b>%</b>
It depends on the collection	46%
No	29%
Yes	17%
Unsure	8%

**Table 10: Necessity to view original collections**

One respondent who thought viewing original collections was necessary stated:

*Sometimes to read – or to ‘feel’ wairua of important documents ...*

While another who did not think it necessary to view originals signalled this:

*I trusted that they were the true version of the original.*

Such answers indicate once again the trust placed in guardians of collections. For many respondents the need to view originals depends on the collection:

*For handwritten sources it might occasionally be useful to see the original. But usually the quality of the digital version is excellent.*

*Accuracy of digitisation varies with each collection. With some sources, I needed to check material for accuracy of language and to provide references.*

While digitisation has increased access to collections, some respondents recognised room for improvement. Digitised collections can be difficult to find, or the quality of the reproduction may affect the readability of the document:

*Like Papers Past, the original search will take you to a snippet of the page. That snippet might not have been 'cut' correctly by the person inputting the information. Viewing the original would remove the potential for digitiser error if items have been transcribed or if the digital version is difficult to read ...*

The improvement and standardisation of digitisation, as called for in existing literature,<sup>17</sup> will impact positively on use. Coupled with promoting the existence of digitised collections, providers will reach more users. These improvements will only happen over time but are called for by respondents to this survey:

*Āe [digitisation has improved engagement with mātauranga Māori], engari me kaha ake te whakatairanga i ngā kohinga reo matihiko kia mōhio ngā tāngata katoa ki whea kite ai ngēnei mātauranga Māori. [translation: Yes, but we need better promotion of digitised te reo collections so everyone knows where to find this Māori knowledge.]*

In question 31 respondents were asked if they had a general preference for either digitised or original collections (table 11). Almost half of respondents did not have a preference for either digitised or original collections while 23% preferred original collections.

<b>Do you prefer original or digitised collections? (35 responses)</b>	<b>%</b>
I do not mind either way	46%
Digitised collections	31%
Original collections	23%

**Table 11: Preference for original or digitised collections**

Respondent quotes are useful to gauge how and why digitised collections are used or not used:

*These are precious taonga! If they were all available in my city 24/7 I'd absolutely choose the originals.*

*I prefer handling the originals but prefer searching the digital.*

*[Digitised collections are] easy to zoom in, also to check words, etc.*

*Digital collections are easier because you can access them from anywhere.*

*Potentially using originals can be dangerous causing unnecessary damage.*

*Wouldn't bother if they weren't available digitally.*

Respondents see the value of original documents, one citing them as precious taonga that they would like to view if they were easily accessible, another opting to use digitised collections in order to preserve original sources from damage from handling. Again, some respondents are more likely to use digitised collections because of ease of access. However, almost half of respondents do not mind whether they use original or digitised collections. This indicates that the information contained within the collection is of most importance to users, rather than the medium in which it is conveyed.

<sup>17</sup> Witten et al. (2001). *Greenstone*, University of Waikato, Hamilton; The National Library of New Zealand (2007). *The National Library of New Zealand Strategic Directions to 2017*, The National Library of New Zealand, Wellington.

## 6. Discussion

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*For as long as we can tell Māori have been entrepreneurial people. Māori have consistently been quick to acquire, take up, adapt and develop new technologies, techniques and ideas. I believe that making use of digital technologies is entirely consistent with being Māori.*<sup>18</sup>

The study of the impacts of digitised te reo collections on the wider community is a relatively new area and is timely, coming as it does when there is a growing desire to revitalise te reo Māori in New Zealand.<sup>19</sup> The following discussion highlights our key findings from the online survey and is grouped within four key themes: Narrative; Whanaungatanga (relationships); Wairua (spirit); and Impact.

### 6.1. Narrative

User narratives provide rich information not found in patron numbers and other quantitative data. By obtaining narratives from users themselves, we are able to collate a corpus of experiences that inform themes from which to build an understanding of impact. Even as an anonymous online survey, we used questions that required narrative-style responses to uncover impacts on users.<sup>20</sup> Narratives have been used in other impact studies documented within the current literature, though the majority focused on institutional rather than user impacts.<sup>21</sup>

In the case of assessing te reo and mātauranga Māori, user narratives fit well with kaupapa Māori theory.<sup>22</sup> They prioritise those who are the subject of research and their use mirrors the oral, storytelling style of traditional ways of disseminating mātauranga Māori.<sup>23</sup> As a means of gathering impact indicators, narrative allows the storyteller to emphasise important aspects of their own experience, rather than these being set by the researcher. This is particularly important as we establish the terrain of digitised te reo collections and their impacts.

We tried to strike a balance between guiding respondents through the online survey so they did not have to work to understand the kaupapa of the project (by providing lists to choose from, for example), while at the same time giving them the freedom to explain their answers to questions. The latter was a particularly apt method for questions that have rarely been asked before.<sup>24</sup> While the results of these qualitative methods may be more difficult to analyse, the answers respondents gave are indicative of the type of impacts we were wanting to extrapolate.

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<sup>18</sup> Respondent from the Kōrero Kitea survey, April–May 2016.

<sup>19</sup> Waitangi Tribunal (2011); Te Puni Kōkiri (2014). *Te Rautaki Reo Māori*, Te Puni Kōkiri, Wellington; Te Puni Kōkiri (2011). *Te Reo Mauriora*, Te Puni Kōkiri, Wellington.

<sup>20</sup> Mercier, et al. (2013); Marsh et al. (2015): examples of narrative.

<sup>21</sup> Debra Lynn Capponi (2010). *Perceptions of Digital Libraries with Indigenous Knowledge: An Exploratory Study*, Masters Thesis, The University of Tennessee; Marsh, et al. (2015); Poll, (2003); Heather Kanuka and Jennifer Kelland (2008). Has E-Learning Delivered on Its Promises? *Canadian Journal of Higher Education* 38 (1): 45–65; Lyons (2012).

<sup>22</sup> Smith (1999).

<sup>23</sup> Ka'ai-Mahuta (2012).

<sup>24</sup> For example, question 34 of the survey asked: 'Has the use of digital te reo collections improved the possibility for New Zealanders to engage better with mātauranga Māori?'

The following narrative is an example of the complex ideas narratives can highlight. This respondent illustrates the complexity of researching; the balance between ease of access through digitisation, and the broader context that original collections can give researchers:

*I like looking at original MSS in the rarefied atmosphere of an archive reading room. It makes it feel like it is a special activity and you give all your attention to the MS you are looking at. I also think you benefit from serendipitous discoveries of related material on shelves or through the advice of staff. This being said, digitisation is hugely beneficial, as I don't live in the same city as the manuscripts I am most interested in, so spending time with the original MSS is a rare privilege but not practical in terms of carrying out all my research.*

This respondent relays the enjoyment of the process of searching original resources that includes the atmosphere of the reading room through to the expertise staff can provide. The response shows that format preference, original or digitised, can be dependent on the information conveyed, the ability to visit institutions and the practicalities of research.

Through narratives we were able to gain insight into potential impacts that we had not anticipated initially:

*... in principle, I think the use of digital te reo collections has improved the possibility for New Zealanders to engage better with mātauranga Māori. This is because the examples that exist have illustrated how making material available can 'democratise' the research process, making material available to people who can't visit repositories. At the same time, one big issue with this is making sure researchers have the context for the information they are accessing online. They may or may not get this context accessing the original items, for example, if they need to access the material via a Curator.*

'Democratisation' or equal access to resources is improved through digitisation. This means that not only those unable to visit original collections, but also those who feel uncomfortable in library or academic environments,<sup>25</sup> have greater opportunity to access information due to digitisation. While the questions we asked naturally rested in social and cultural impacts, this answer highlighted economic and political impacts of digitisation. Having greater access makes information available to a broader range of people and reduces travel costs and time. This response illustrates that narratives can provide room for thoughtful answers and can illuminate impacts that may be missed through other data collection methods.

## 6.2. Whanaungatanga

Whanaungatanga is defined as "relationship, kinship, sense of family connection - a relationship through shared experiences and working together which provides people with a sense of belonging. It develops as a result of kinship rights and obligations, which also serve to strengthen each member of the kin group. It also extends to others to whom one develops a close familial, friendship or reciprocal relationship"<sup>26</sup>

Relationships are inherent to information gathering, from subject matter that can connect people to the past and ancestors,<sup>27</sup> through to relationships with providers and those who share in the information through its dissemination. Additionally, the formats in which a single collection can be viewed (digitised, written, oral and pictorial, for example) create a

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<sup>25</sup> Troy Mana Paul Tuhou (2011). *Barriers to Māori Usage of University Libraries: an exploratory study in Aotearoa New Zealand*.

<sup>26</sup> Definition from the Māori Dictionary: <http://maoridictionary.co.nz>. Accessed 21 September 2016

<sup>27</sup> Caswell et.al. (2015), pp.23 & 28.

corpus and network of ways to transfer knowledge. We umbrellaed these elements under the term whanaungatanga, covering the gamut of relationships, networks and connections that researching information can foster.

This research found evidence that digitisation of te reo collections provides a significant societal impact by supporting a sharing and relationship system among communities and whānau (family). These relationships exist well beyond the bounds of the access interactions between the memory institution and their customer, and therefore beyond the traditional mechanisms of measuring and reporting on digitisation.

- Ninety-five percent of respondents shared the digitised archives they found
- Sixty percent of those shared archives were shared again by the recipient
- Sixty-seven percent liked being able to share the collection with friends & whānau
- Twenty-two of respondents sourced their digitised collections from a friend
- Seventy-six percent have used digitised collections received offline
- Twenty-five percent of respondents stated they had added digitised archives to an iwi repository
- Throughout the survey, respondents cited a sense of obligation to whānau and community members to share information found in the archive, to those to whom it related.

Greater access and abilities to disseminate information enables whanaungatanga or the act of building relationships. Digitisation can contribute to the revitalisation of te reo and mātauranga Māori and has the ability to reach diasporic Māori populations who were unable to view these collections prior to digitisation. In this way, digitisation of te reo collections improves information gathering by adding to the multiple formats available to researchers.

This is the first time these relationships have been uncovered in archival research, and these findings limit us to stating the existence of the system and evidence that it is supported or sustained in some way by digitised collections. However more research is required to understand the extent of this sharing system, whether it differs with digital collections as opposed to physical collections, or with the use of digital collections in other cultures.

### 6.2.1. Access

One of the greatest contributions digitisation has made to respondents to the survey is improved access to information. Some reasons given by respondents who preferred online collections to offline and original collections included:

*Accessibility at any time and information more easily gained, with more options, through the search engine.*

*Accessing information anywhere has many benefits such as convenience, info at your fingertips.*

*Easier access, do not have to actively look for it.*

Some respondents just enjoyed the accessibility of digitised collections irrespective of online or offline components:

*The main thing is accessibility, not having to travel to visit archival repositories is a huge plus ... It makes my job a lot easier to pull together, to source kōrero [narrative] from our tūpuna [ancestors].*

Abilities to revisit information irrespective of the location of original collections has removed barriers for researchers. They can research at their convenience and collate like-information through search engines. Digitised collections can give users greater freedom and control over how they research and enhances the ability to share information with their networks. Enabling greater access moves institutions closer to democratising collections. While the preservation and care of collections are important to inspire trust in the information they care for, more people are now able to see the information for themselves, without having to go through an intermediary such as a curator or professional researcher. This is an important aspect of our findings that will have an impact on the future of collections management and research practices.

Digitisation alleviates some of the barriers users face by removing expectations and interactions that may make users uncomfortable in some settings. Though some members of communities may feel they cannot participate or contribute in traditional ways, digitisation of collections can help them make connections in other ways:

*... you don't get the stigma you can receive when asking others for help regarding whakapapa.*

Sidestepping such potential hindrances as unfamiliarity with Māori protocol, breakdown in relationships and uneasiness in institutional settings,<sup>28</sup> digitisation of collections creates another avenue to access information.

For researchers, it is usually not the format that the information comes in that drives research, but the information itself. In this respect, while digitisation has undoubtedly increased accessibility to collections, we should not overstate its impact. A number of respondents to the survey recognise the benefits of digitised collections, but see it as one of a number of formats available to them:

*They are ... a body of knowledge that adds to a larger pool of mātauranga Māori.*

*Katoa ngā momo kohinga, he āwhina i te tangata e rangahau ana, e rapu ana i ngā kōrero.*  
[translation: All types of collections help people who are researching and seeking information]

Digitised te reo collections add to the corpus of formats available to researchers and are an important step toward more inclusive research strategies that can connect a broader range of people to desired information.

### 6.2.2. Revitalisation

Respondents recognised the impact digitised te reo collections have on the revitalisation of both te reo and mātauranga Māori. As a result of greater accessibility to collections, the dissemination of information is improved. Collections can be easily shared between whānau, hapū and iwi groups by sharing links on iwi websites, Facebook pages, USB sticks, or at wānanga presentations.

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<sup>28</sup> Tuhou (2011).

Information contained in te reo collections have become more widely available due to digitisation, which means more people have access to examples of older forms of te reo and dialectical differences:

*... access to older versions of the Reo lends to the revitalisation of the Reo.*

*... any platforms that support its [te reo] revitalisation is important ...*

Projects respondents used digitised te reo collections for included ones concerning the revitalisation of te reo and mātauranga Māori such as:

*Thesis and academic articles on the use of metaphor and formulaic language.*

*... te reo and its use in the home ...*

*Whakapapa for personal use ...*

*Iwi language revitalisation ...*

*... traditional Māori practice used in conservation.*

*Information about the division of our whānau land ...*

*... personal journey to learn te reo ...*

*... to learn waiata ...*

*... koinei pea taku rauemi rangahau matua mō te reo Māori o mua ...[translation: this is perhaps my main research resource for the Māori language of the past]*

*Researching waiata, haka from Hauraki ...*

*... for Māori language teaching.*

Users are able to engage with mātauranga specific to their ancestors such as learning local waiata, haka and dialects, and about tribal areas and boundaries. Respondents showed interest in the development of te reo from past to present. Digitisation has aided revitalisation by making historical documents more widely available. Te reo and mātauranga Māori require interaction with networks and communities for revitalisation to occur and these responses illustrate whanaungatanga in action.

Some respondents highlighted the increased possibilities to find new information concerning whakapapa and the greater capacity to share this new knowledge with whānau, hapū and iwi:

*I recently, through the use of digital repositories, was able to identify and visit an ancient pā site of our ancestors. Many people have said they knew where [it was] but could not tell me. I have now through this media located many others and have just finished a wānanga involving cultural mapping of wāhi tapu and pā sites. None of our kaumātua were aware of the sites shown and in fact were deeply and emotionally moved in a positive way. We have lost so much. The digital age has allowed us to reclaim some of it back.*

Digitised te reo collections have had positive impacts on Māori communities, opening up new avenues to seek out histories and disseminate information to communities.

### 6.2.3. Sharing

Understanding the extent to which digitised te reo collections are shared provides insight into the life of the items beyond the use by the primary researcher who accessed the items

from a provider, and indicates an influence and impact on a wider community or network of users. While a number of respondents live in main centres where many original collections are housed, some respondents live overseas, indicative of the diasporic nature of today's society.<sup>29</sup> Such circumstances illustrate the importance of digitised versions of te reo collections for those unable to access information from institutions directly.

The Kōrero Kitea survey found that many respondents enjoyed being able to share collections and furthermore, digitisation enabled some respondents to satisfy obligations to whānau, hapū, iwi and other networks. Some respondents expressed their reasons for sharing digitised collections:

*I have shared material with people who have a right to look at such material as being from the appropriate iwi.*

*I informed others about the existence of the collections as they asked particular questions about sources and I felt that it was appropriate to pass on this information.*

*Teaching purposes.*

*Sharing is transformative.*

*To share the whakapapa research with my family.*

*We want to ensure knowledge is not lost.*

*It worked for me, so shared with the hope that others would also benefit.*

*So they could undertake their own learning.*

*I shared the material so that others would see the potential of such databases.*

That researchers are sharing digitised forms of collections is important for collection providers to recognise. The obligation to share information pertinent to their wider communities is real to many Māori. Coupled with current modes of information dissemination via web pages and social media, barriers and restrictions placed on institutional collections need to be addressed and re-evaluated. Respondents to the survey were largely positive about the sharing capabilities of digitised collections and have already been using the technology to connect back to communities.

The extent of the sharing found by this research indicates a possible 'multiplier effect' provided by use of digitised collections, where the initial use can provide many additional uses well beyond the initial access by the primary users. Understanding this multiplier effect would enable institutions providing digital access to have confidence the their impact can be multiplied throughout communities of interest. Future research is necessary to better understand the extent of the multiplier effect and how to incorporate this phenomena into the reporting on the impacts of digitised collections.

### 6.3. Wairua

One question in the online survey directly asked respondents about the effect digitisation has had on the wairua of te reo and mātauranga Māori collections. We hypothesised that it would be a term that could provide insights into why and how digitised te reo collections were being used, or in some cases, not used. As shown in the overview of findings, the

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<sup>29</sup> Paul Hamer (2008). Māori in Australia: Voting, *Policy Quarterly*, 4(3), pp. 22.



response was mixed. As the findings show, 45% of respondents thought there was no impact on wairua through digitisation, while 37% thought it did have an impact. Many respondents suggested that digitisation does affect the wairua, but felt that preservation of knowledge and being able to hand that knowledge down to future generations was important. This tension did not negate the value of digitisation for a number of respondents.

*Yes [digitisation affects wairua of collections], but if we don't save it somewhere we will lose that knowledge.*

*I think the wairua remains with the original document. The reality is that these days whānau Māori are spread all over the world ... Equal access ... can be supported through digitisation and online availability.*

*...this depends on the material and how it is looked after.*

Different information formats, from written, oral, pictorial and presentational, through to digitised, can convey information in multiple ways. For example the style and gestures of an orator can contribute other layers of information unavailable in written form. As one respondent explained, there can be implications on wairua when using digitised formats:

*In most cases yes it [digitised information] loses the wairua that the original works possessed such as the whakapapa kōrero that is specific to certain whānau/hapū/iwi and would lose its significance if the information were just passed out.*

The comments below provide good examples of the comments provided on wairua:

*...the recording can be a degraded version of the original ... there is mana in the voice/sound of those who may have passed.*

*I think digitising can lose some of the wairua you could get from learning the same information from a kaumātua [elder].*

*Digitisation or any static form of holding information can I believe affect the accessibility of the wairua attached to the information. However this can equally be applied to the written word. The relationship between the information and those that are sharing it, giving or receiving, is where the strength of the wairua lies.*

These researcher assumptions are important to acknowledge to help us better adapt research to user points-of-view. As discussed previously, whanaungatanga is inherent in information gathering and sharing, as suggested by the last response shown above. Furthermore, responses to the question about wairua illustrated the uniqueness of te reo and mātauranga Māori collections and signalled that Māori concepts are important considerations in relation to the digitisation of such collections.

#### 6.4. Impact

As a mechanism for understanding impact, this research sought to find connections between the digitisation activities of the memory sector with the macro outcomes government is seeking to achieve that indicate an improvement in the lives of New Zealanders. Using digitised te reo collections as a case study, this research finds clear connections between the use of digitised collections and several key outcomes, and encourages the memory sector to use these links to improve their thinking, reporting and promoting of digitisation.

Findings have been assessed in the context of three key government strategies (relating to Māori language, the Treaty of Waitangi and social cohesion respectively) that are

particularly relevant to the focus of this research. A summary of the connections identified are provided below. This analysis represents a new way for memory institutions to articulate the impact of their digitisation activities to New Zealand.

#### 6.4.1. Te Rautaki Reo Māori / Māori Language Strategy

The Māori Language Strategy (the Strategy) 2014 outlines the Crown's approach to supporting the revitalisation of the Māori language. The Strategy includes five result areas that represent improvement in the revitalisation of the language.<sup>30</sup>

1. Te Mana o te Reo: increasing the status of the Māori language in New Zealand society;
2. Te Ako o te Reo: increasing the number of whānau Māori and other New Zealanders who can speak Māori;
3. Te Mārama Pūki te Whakaora Reo: increasing critical awareness about Māori language revitalisation;
4. Te Kounga o te Reo: supporting the quality and appropriate use of the Maori language and iwi dialect maintenance;
5. Te Kōrerotanga o te Reo: increasing the use of the Māori language among whānau Māori and other New Zealanders, especially in the home.

Many connections between the digitisation of te reo archives and the result areas of the Strategy were evident, including:

- Sixty-five percent of respondents used digitised te reo collections for language revitalisation initiatives
- Sixty-seven percent of respondents liked being able to share the collection with friends & whānau, which supports the Māori Language Strategy's result area of increasing the use of Maori language among whanau Maori & other New Zealanders, especially in the home
- There was a reoccurring narrative that the *"...digital collections of Māori language texts [have been] extremely valuable for developing the Te Aka online dictionary"*
- *"koinei pea taku rauemi rangahau matua mō te reo Māori o mua."* [translation: this is perhaps my main research resource for the Māori language of the past]

#### 6.4.2. Ngā whakataunga tiriti / Treaty of Waitangi settlement process

The Treaty of Waitangi Settlement process was established in 1975 and continues to this day as a critical mechanism to improve the relationship between Māori and the Crown, and to improve the well-being of Māori in New Zealand. The process provides a legal and financial mechanism for the government to acknowledge and provide redress to Māori for breaches of the Treaty of Waitangi, signed in 1840. The process involves a significant research process as part of the negotiations, but there has previously been no published evidence of the role of digital archives to support this process.<sup>31</sup>

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<sup>30</sup> Te Puni Kōkiri. Māori Language Strategy 2014. <https://www.tpk.govt.nz/en/a-matou-mohiotanga/language/maori-language-strategy-2014> (accessed 12 September 2016).

<sup>31</sup> Richard S. Hill, 'Ngā whakataunga tiriti – Treaty of Waitangi settlement process', Te Ara - the Encyclopedia of New Zealand, <http://www.TeAra.govt.nz/en/nga-whakataunga-tiriti-treaty-of-waitangi-settlement-process> (accessed 12 September 2016).

It is significant that 22% of respondents reported an outcome from their use of digitised te reo collections of being able to contribute to a Treaty of Waitangi settlement process.

The Treaty settlement process is a multi-billion dollar process, with significant social and economic outcomes being achieved by iwi as a result of the settlement. This research finds a connection between use of digitised te reo archives and that process, however further research is required to fully understand the extent and impact of that connection.

### 6.4.3. Social cohesion

The New Zealand Treasury's *Living Standards Framework* outlines social cohesion as a key pillar to supporting higher living standards.<sup>32</sup> Social cohesion relates to the trust between citizen and state, social inclusion in decision making, and evidence of identity and inclusion in government activities. Some examples of the connections between digitised te reo archives and improved living standards in New Zealand include:

- Forty-nine percent of respondents experienced an outcome of personal enlightenment from use of digital te reo Māori archives
- Fifty-four percent of respondents experienced an outcome of gaining family knowledge
- *“the convenience of this information has been pivotal to including some whanau in whanau decisions”*

## 7. Conclusion

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Kōrero Kitea is a project that seeks to understand the uses of digitised te reo collections, in order to understand what impact they have had. This report discusses the results of our initial research via an online survey conducted from April to May 2016. Responses were largely positive about digitised te reo collections, even after weighing up cultural impacts such as the effects on wairua of digitisation and after comparisons with other information formats including original documents. This was indicated by desires for more te reo collections to be digitised and current digitised collections to be reproduced in their entirety.

This survey has helped us to both understand impacts of digitised te reo collections and also helped design relevant impact assessment methodology. Using narrative-style questioning, having a commitment to understanding impact through long-term projects, and focussing on users rather than institutions has been important to our impact assessment. Narrative enables participants to drive answers and impact paradigms.

Whanaungatanga is a term that encompasses relationships which we have used to signal a major impact of the survey. Greater access via digitisation fosters relationships and connections via acts of sharing collections within whānau, hapū, iwi and other networks. Collections are easily disseminated to others through web links, USB sticks, or within a

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<sup>32</sup> The Treasury. The Living Standards Framework. <http://www.treasury.govt.nz/abouttreasury/higherlivingstandards> (accessed 12 September 2016).

wānanga context. Being able to share and preserve information for future generations was important to respondents and prompts collection providers to be aware of this implication of digitisation.

We asked respondents about relationships with providers and their use of collections, and gained information about levels of trust in providers and digitised collections. Many respondents found their relationship with providers was enhanced due to interactions with digitised te reo collections, as well as becoming more aware of what information providers housed.

As a mechanism for understanding impact, this research found connections between the digitisation activities of the memory sector with three macro outcomes government – The Māori Language Strategy, The Treaty of Waitangi Settlement process, and the social cohesion pillar of the Higher Living Standards Framework. These connections provide a line of sight from the digitisation activities of the memory sector and the macro strategies of the New Zealand government, and provide an opportunity for the sector to change how it articulates the value of digitisation in New Zealand.

This project has synergies with other studies currently underway internationally investigating digitised collections and information management in indigenous contexts. Locally, the focus on Māori language strategies of government departments and iwi organisations signals that this project is a timely one. Not only will this project feed important information into te reo strategies, but it can also inform impact assessment throughout academia and the information management sector.

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## 9. Appendices

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### 9.1 Online survey questionnaire

#### Kōrero kitea: Ngā hua o te whakamamatitanga

#### The impacts of digitised te reo collections.

E ngā mana, e ngā iwi o te motu, tēnei te mihi ki a koutou katoa. Nau mai ki tēnei rangahau, ki te kimi whakaaro mō nga hua o te whakamamatitanga o ngā kohikohinga kōrero i roto i te reo Māori.

Mā tini, mā mano, ka rapa te whai.

Welcome to our survey concerning use and impacts of digital te reo collections. In this survey, we ask you about your use of digital te reo collections, and how these collections have impacted on your information gathering activities. The survey will take between 20 to 50 minutes to complete. You can save your progress and continue the survey for up to three days, commencing from the day you begin.

This survey asks for more anecdotal answers than you may be used to from other online surveys. Our project and research methods prioritise personal experiences of digital te reo collections use. The explanatory prompts within the survey are optional to answer but are very helpful to our research and give you more of a say in our project outcomes.

By taking this survey you agree to the information you give in the survey being used for the digital te reo collections project. The survey will be anonymous and any personal information given will not be attributed to your survey submission. Once you have completed the survey, the information you have provided cannot be withdrawn as no information provided will link your identity to your survey. We thank you for participating.

Key concepts:

Digital te reo collections: Historical archives in digital form (diaries, letters, newspapers etc), that are entirely in te reo, or have components of te reo.

Online: Digital collections accessed via the internet.

Offline: Digital collections access outside of the Internet (i.e. via usb or hard drive).

If you have any questions, please contact:

sarsha.douglas@vuw.ac.nz or mark.crookston@dia.govt.nz

Ngā mihi nui,

Nā te rōpū rangahau, nā:

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Dr. Chern Li Liew, School of Information Management, Victoria University of Wellington

Dr. Gillian Oliver, School of Information Management, Victoria University of Wellington

Sarsha-Leigh Douglas, Research Assistant

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Welcome to this survey concerning digital te reo collections. The following questions are about where you live and where you are from. These questions are optional to answer.

Q1. What is your ethnicity? If Māori, which iwi do you identify with?

Q2. Which area do you live in?

Te Tai Tokerau/Tāmaki-Makaurau

Hauraki

Waikato/Te Rohe Pōtae

Te Arawa/Taupō

Tauranga Moana/Mataatua

Te Tai Rāwhiti

Te Matau-a-Māui/Wairarapa

Taranaki

Whanganui/Rangitikei

Manawatū/Horowhenua/Te Whanganui-ā-Tara

Te Waipounamu/Wharekauri

Q3. Which city or town do you reside in?

Q4. What is your profession/job(s)? (This can include paid, volunteer, full-time, part-time or community work. Any work activity you are involved in).

## BLOCK 2: DIGITAL TE REO COLLECTIONS

This section enquires about your level of interaction with digital te reo collections. By digital te reo collections we mean original collections - oral or written - that have been reproduced into digital form. These collections can be partially or totally in te reo.

Q5. Have you used digital te reo collections before? Y/N

Q6. Why have you not used digital te reo collections? Select all that apply.

I never came across any digital te reo collections

The collections I found were not relevant

I was unsure if it was appropriate for me to use them



- I prefer using original collections
- I am not proficient enough in te reo
- Other (please specify)
- Other (please specify)

Q7. Have you used written or oral (audio recording) te reo collections reproduced in digital form? Written/Oral/Both

Q8. Have you used digital te reo collections obtained online or offline? (eg: USB stick) Online/Offline/Both

Q9. What do you like about using digital te reo collections available online? (Select all that apply)

- Greater accessibility
- Convenience
- Being able to view a range of collections from around the country
- Being able to share the collection with friends and whānau members
- Being able to revisit the collection at my discretion
- I don't have to visit a library/archive/museum institution
- Other (please specify)
- Other (please specify)

Q10. What do you like about using digital te reo collections available offline? (eg: provided via USB stick - not via the internet)

- I feel the information is more safeguarded from falling into the wrong hands than online collections
- I feel offline rather than online sharing of digital information is more appropriate
- I do not have internet access, or have poor internet access, so offline collections are more inclusive for people in my circumstance
- Greater accessibility
- Convenience
- Being able to revisit the collection at my discretion
- Other (please specify)
- Other (please specify)

Q11. Generally speaking, do you prefer digital te reo collections to be online, or offline? Please explain your answer. This question is optional to answer.

### BLOCK 3: YOUR USE OF DIGITAL TE REO COLLECTIONS

This section asks about your use of specific digital te reo collections.

Q12. Who provided the digital te reo collections you used? (select all that apply to all the collections you have used)

- Library/Archive/Museum providers (please specify)
- University/Wānanga providers (please specify)
- Other school or education providers (please specify)
- Government departments (please specify)
- Iwi (please specify which iwi)
- Other Māori groups (please specify)

- A family member
- A friend
- Other (please specify)
- Unsure

Q13. Which of the following digital te reo collections have you used? (Select all that apply) [all online examples have links in the survey]

- Papers Past (Alexander Turnbull Library)
- Niupepa (University of Waikato)
- He Tirohanga ki Muri (Hocken Library, Otago University)
- Te Kawa a Māui Atlas (Victoria University of Wellington)
- Te Ara: The Encyclopedia of New Zealand
- Te Ao Hou (Alexander Turnbull Library)
- Hokianga Online Exhibition (Auckland City Libraries)
- Maori Land Online (Maori Land Court)
- Hauraki Digital Archive (Hauraki Maori Trust Board)
- Elsdon Best Collection (The Knowledge Basket)
- Walter's World: The Nash Collection (Archives New Zealand)
- Grey New Zealand Maori Manuscripts (Auckland City Libraries)
- The Papers of Sir Donald MacLean (Alexander Turnbull Library)
- The Journal of the Polynesian Society (University of Auckland)
- Appendix to the Journal of the House of Representatives (Alexander Turnbull Library)
- New Zealand Electronic Text Collection (Victoria University of Wellington)
- The Legal Māori Dictionary (Victoria University of Wellington/Māmari Stephens)
- Other (please specify)
- Other (please specify)

#### BLOCK 4: NARRATIVE

***These next few questions ask about your use of digital te reo collections. As this research seeks narrative on the uses and impacts of digital te reo collections, your experiences and anecdotes are valued. The questions in this section, however, are optional to answer.***

Q14. Can you briefly describe your project(s) that have used digital te reo collections? Please indicate what collections you used for your project(s).

Q15. Was there a specific digital te reo collection you used that you found particularly interesting? If so, what was it, and why was it so interesting?

#### BLOCK 5: COLLECTIONS

This section asks for your recommendations for digital te reo collections. The questions in this section are optional to answer.

Q16. Are there any te reo collections you think SHOULD NOT be digitised? Please explain your answer.

Q17. Are there any te reo collections that you think SHOULD be digitised that are not currently digitised? Please explain your answer.

#### BLOCK 6: OUTCOMES

The following section asks about the outcomes of your use of digital te reo collections.

Q18. For what purpose did you use digital te reo collections? (Select all that apply)

- Revitalisation of te reo
- Whakapapa research
- Treaty settlement process
- Research for work or school
- Broadening my knowledge
- To contribute to my community
- To educate others
- Other (please specify)

Q19. What were the outcomes of your use of digital te reo collections? (Select all that apply)

- Completed a school/university paper
- Completed a work project
- Publication/public presentation
- Gained family knowledge
- Passed knowledge to others
- Contributed to the understanding of Māori history
- Contributed to the treaty settlement process
- Added to an iwi repository
- Personal enlightenment
- Contributed to my understanding of my identity
- Created an online resource or other resource
- Research still continues
- Generated questions that require further investigation
- Other (please specify)
- Other (please specify)

Q20. Did your experience with digital te reo collections change your relationship with the digital te reo collections provider, such as a library, archive, or museum? Please explain your answer. This question is optional.

Q21. As digital collections are more mobile than their original counterparts, have you shared any of the digital te reo collections you have used with others? By shared, we mean showing websites or providing digitised data to others.

Yes/No [If no skip to Q24]

Q22. Did they use any of these shared collections?

Yes/No/Unsure [If yes NOT selected skip to Q24]

Q23. Do you know for what purpose they used these collections? If yes, please explain.

Yes/No/Unsure

Q24. What was your reasoning for sharing or not sharing these digital te reo collections with others? This question is optional.

#### BLOCK 7: TRUST OF DIGITAL MEDIUM

The following section asks about your TRUST of the digitisation of te reo Māori.

Q25. How appropriate do you find the digital medium in transferring te reo and other mātauranga Māori?

- Appropriate
- Somewhat appropriate
- Somewhat inappropriate
- Inappropriate
- Unsure

Q26. Why do you find the digital medium appropriate or inappropriate in transferring te reo and other mātauranga Māori? This question is optional.

Q27. Many believe te reo has its own wairua/spirit. Do you feel digitising te reo affects the wairua of the reo and information being conveyed? Please explain your answer. This question is optional.

#### BLOCK 8: ORIGINAL AND DIGITAL COLLECTIONS

The next section inquires about your preferences regarding original te reo collections and their reproduced digitised counterparts.

Q28. Using the slider, please indicate how applicable you find the following statements are to DIGITAL te reo collections generally - 0 being untrue, 5 being neutral/undecided, 10 being very true.

- Easy to use
- Convenient
- Easy to find
- Easy to revisit
- Easy to share
- Interactive
- Has mana (conveys mana of information provided)
- Has a wairua
- Conveys information well
- Helps facilitate community involvement

Q29. Using the slider, please indicate how applicable you find the following statements are to ORIGINAL te reo collections generally - 0 being untrue, 5 being neutral/undecided, 10 being very true.

- Easy to use
- Convenient

Easy to find  
Easy to revisit  
Easy to share  
Interactive  
Has mana (conveys mana of information provided)  
Has a wairua  
Conveys information well  
Helps facilitate community involvement

Q30. Did you feel it necessary to view the original sources in addition to any of the digital te reo collections you used? Please explain your answer.

Yes/No/It depends on the collection/Unsure

Q31. Generally speaking, do you prefer using original collections or digital reproductions of original collections? Please explain your answer.

Original/Digital/Don't mind either way/Unsure

#### BLOCK 9: RESEARCH BEHAVIOUR

The following section enquires about how digital te reo collections have impacted on your research process. By research we simply mean any information gathering activity.

Q32. Has the availability of digital te reo collections improved your research process?

Yes/No

Q33. To what degree have digital te reo collections been important to your research outcomes?

Very important

Important

Somewhat important

Unimportant

Q34. In your opinion, has the use of digital te reo collections improved the possibility for New Zealanders to engage better with mātauranga Māori? Please explain your answer if you wish. This question is optional.

#### SECONDARY SURVEY (CONTACT DETAILS)

Q35. Would you be interested in being interviewed more on this topic? If so, please provide your name and email so we can contact you.

Name/email

Q36. Would you like to receive results from this survey and the outcome of this project? If so, please provide your email (name optional). Thank you for participating in this survey. We appreciate your time.

Name/email

## 9.2 Literature review

Completed as part of the initial research to support the scoping of the project.

### Introduction

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This literature review will inform a project conducted through Victoria University of Wellington and the Alexander Turnbull Library that will evaluate impact on patrons who use digital te reo collections. The project aims to develop a methodology to be used in impact assessment for digital collection providers. It will assess how patrons use digitised te reo collections, quantify user benefits from interactions with collections and their trust of digital te reo collections. Literature concentrating on digitised te reo, digital indigenous knowledge, impact assessment and studies concerning trust inform this review. A number of themes are highlighted across these categories. The value of anecdotal evidence coupled with metric data is an appraised outcome of the literature that challenges the lack of validity given anecdotal information in academia thus far. Reciprocal and collaborative methods are universally shown as creating meaningful and long-term digitised indigenous projects. In this way, a user-focused and holistic method arises as the best fit for impact assessment design.

### DIGITISED TE REO

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Few articles were found that discussed impacts of digital te reo collections on patrons. Those articles that were found rested in either education or indigenous studies disciplines. They concern the building of digital te reo collections rather than analysing past implementation and digital development processes into the realm of use and the outcomes of use (see Whaanga et.al. for example). Though these articles do not wholly concern the impacts of digital te reo collections, most provide examples of how digital te reo collections are used by patrons. Literature in this section concern revitalisation and preservation of te reo, technology as a tool, self-determination for Maori, engagement with digital resources, and collaboration and relationships between parties involved.

Rachael Te Awhina Ka'ai-Mahuta's study of the digital repository of waiata and haka through the website *Tamata Toiere* shows that the site adds to the repertoire of adaptations Maori have used to disseminate knowledge:

*Historically, Maori have been quick to adopt new technology and skills which they recognise can be of benefit to the advancement of their society...In the nineteenth century Maori wrote prolifically, adapting the oral arts for the press...The adoption of digital technology to preserve waiata and haka provides a tool that can aid the oral tradition (Ka'ai-Mahuta 2012:104 & 100)*

Importantly, she views this repository as a "resource to supplement the continued oral traditions of Maori." (Ka'ai-Mahuta 2012:107). As cultural epithets, waiata and haka provide multi-sensory access to Maori knowledge. Audio and visual examples within the *Tamata Toiere* repository are accompanied by translations and explanations of each item to ensure the cultural information provided in songs are interpreted correctly. In this sense, the digital realm houses many elements needed for comprehensive knowledge dissemination.

Preservation of physical resources and taonga have highlighted digitisation of Maori collections as useful for both institutions who are caretakers of collections, and the Maori owners of collections (Whaanga et.al. 2015). Wider access and preservation of original resources guided the digitisation of the Pei Jones Collection (Whaanga et.al 2015). *He Matapihi Ma Mua, Mo Muri*, details the processes of the University of Waikato and the Pei Jones whanau in solidifying relationships to ensure the best care for the Pei Jones collection. Jones's whanau were not just donors, but were integral to how the collection was displayed and understood to ensure the mana and control of the taonga were not violated. From the display of physical collections, multiple hui and negotiations, a collective deed drafted between institution and donor, a shift from westernised cataloguing to one based on the collection and systems of matauranga Maori through to whanau involvement in editing and proofing of digitised articles, the example of the Pei Jones collections is an ongoing narrative of how these initial processes in collection management can ensure the best possible use of collections - both physical and digital. Though our project looks beyond the gathering of collections and their digitisation to focus on how digital te reo collections are used, the care taken in the Pei Jones Collection that recommends a shift in the Western archival mindset to one that prioritises matauranga Maori is important in any assessment involving Maori collections. Our project will add to the cyclic evaluation needed to improve digitised Maori taonga and knowledge. In this sense, our project will feed into better practices in the earlier steps of collections management by looking at the outcomes of collections use.

Keegan investigates the use of two digitised indigenous newspaper resources – Hawaiian and Maori Niupepa respectively (2007). Though focussing on the technicalities of digitised indigenous languages and language preferences online, like Ka'ai-Mahuta, Keegan acknowledges the value of transferring te reo into the digital realm (Ka'ai-Mahuta 2012; Keegan 2007). Digitisation provides a platform to illustrate the progressive chronology of how te reo has developed as a language (Keegan 2007). Additionally, digitisation provides wider accessibility to te reo texts, aiding language revitalisation and self-determination for Maori (Keegan 2008; Ka'ai-Mahuta 2012; Mato 2009). Most articles in this section recognise these benefits of digitised te reo resources but identify the need for a holistic approach, not solely reliant on digitised resources (Ka'ai-Mahuta 2012; Mato 2009; Bennett and Barbour 2012). In Paora James Mato's study, contact with other students, teachers, and kaumatua increased engagement with resources (Mato 2009). In this respect, digital resources can help build and reaffirm relationships. Though impacts of digitised te reo resources are inferred in these articles, connecting their usefulness in conveying Maori knowledge, our project will cast a lens directly on the impacts digitised te reo resources create.

Karn Heavey's survey and interviews of Maori polytechnic students and staff provides a much needed insight into why and how people are using digital te reo Maori resources and is something we look to build on (2014). Along with difficulty in using technologies due to varying skill levels and design issues, Heavey's interviewees were distrustful of some of the information online. For example some queried translations with colleagues to determine the extent to which resources could be trusted (2014). In their articles, Heavey, Ka'ai Mahuta, and Keegan all encourage wariness of how te reo is presented in digital form (Heavey 2014; Ka'ai-Mahuta 2012; Keegan 2007). If it is translated to another language, is it a correct translation? Is the original source provided? What parties have been involved in creating the digital resource? These considerations are important to whether people use digital te reo resources in the first instance, and if so, in what capacity.

A literature review, prepared for the Ministry of Education concerning Virtual Learning Environments and e-Learning in Kaupapa Maori education gives a comprehensive overview of

literature regarding digitised te reo resources (Tiakiwai and Tiakiwai 2010). Sarah-Jane and Hans Tiakiwai suggest more research is needed in this field, particularly regarding engagement with and impact of digital te reo resources on users. Student engagement is dependent on teacher skills with curriculum, te reo, and technologies used, as well as student's ability to access resources online and their own technical proficiency (Tiakiwai and Tiakiwai 2010; Bennett and Barbour 2012; Heavey 2014). Though this is not a barrier to further investigation of how digital resources impact users and their projects, it has thus far provided a stumbling block for many academics who focus on system design and user access. Engagement and impact assessment will help create a deeper knowledge of how digital te reo resources are being used - progressing from a focus on technology and implementation of resources to the benefit and use of these digitised resources.

### Kaupapa Maori methodology and research reciprocity

Kaupapa Maori and Maori-centric methodology were developed by Maori academics to shift the Western view prevalent in academic research (Smith 1999; Bishop 1999; Smith 1997). Some indigenous communities are understandably wary of dealing with academic approaches that provide little benefit to indigenous communities. In her Masters thesis, Leonie Pihama discusses the theoretical basis of indigenous distrust in mainstream academic research on indigenous communities:

*...intrinsic to Kaupapa Maori theory is an analysis of existing power structures and societal inequalities. Kaupapa Maori theory therefore aligns with critical theory in the act of exposing underlying assumptions that serve to conceal the power relations that exist within society... (1993:57).*

Linda Tuhiwai-Smith's seminal work on decolonising methodologies prioritises reciprocal and long-term benefits for both indigenous groups and the knowledge created (1999). Bound in these methodologies is regular consultation and input by indigenous groups.

Reciprocity is imperative in projects between indigenous groups and institutions. The literature shows that trust is built through long-term, reciprocal approaches. Smith states:

*Reporting back to the people is never ever a one-off exercise or a task that can be signed off on completion of the written report...there was clearly a discourse which was anti-research and was very cynical about non-indigenous research...[as an indigenous researcher] I found that people entrusted me with information about themselves ...I felt honoured by that trust, and somewhat obligated as well - in the sense of having to be very careful and very respectful about how I handled such information (1999:15 & 197).*

For indigenous communities, the stigma of being "the other" in research presents an obstacle to researchers looking to involve themselves in indigenous knowledge acquisition. Yet, through respectful means, and genuine collaboration, more dynamic and trusted research can eventuate.

Carolyn Bennett and Michael K. Barbour (2012) show there are some benefits to e-Learning for Maori, evidenced by their case study of Northland secondary school distance learners. e-Learning allows greater access to education that would not be available at the more isolated Northland schools and adds another dimension to learning that engages students that find it more difficult in traditional classroom and academic settings (Bennett and Barbour 2012). This study and others within this section saw collaboration and relationships between involved parties as paramount to the success, longevity and use of online resources, greater participation and relationship-building (Tiakiwai and Tiakiwai 2010; Mato 2009; Bennett and Barbour 2012; Ka'ai-Mahuta 2012).



## DIGITAL INDIGENOUS KNOWLEDGE

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As there is little within the body of literature that deals with digitised te reo resources, we have broadened our literary search to articles concerning the impact of digitised indigenous knowledge on users worldwide. All articles in this section detail indigenous-led or collaborative case studies between archival institutions and indigenous groups (Klaebe 2008; Kral 2010; Marrett 2006; Buchtmann 2000; Capponi 2010). These articles, like those concerning digitised te reo, stress collaboration and ongoing relationships between institutions and indigenous groups as paramount to meaningful and long-term digital projects.

Nakata et.al. (2007) and Klaebe et.al. (2008) detail and evaluate the Libraries and Knowledge Centre (LKC) model implemented in Aboriginal communities in the Northern Territory. Models are adapted to the communities involved, and centres provide data storage of local Aboriginal stories, as well as access to outside, English-based information (Nakata 2007). Buchtmann (2000), Kral (2010), and Marett (2006) provide examples of LKCs at work such as Buchtmann's investigation of the Warlpiri experience of LKCs. For the Warlpiri people in Northern Australia, their forced settlement on reservations through government policy has segregated them from traditional communication networks with other aboriginal communities (Buchtmann 2000). Online services developed by the Warlpiri people have re-established links with neighbouring aboriginal settlements, and restored a communal sense of self-determination (Buchtmann 2000). Kral's study of digital media use by remote aboriginal youth in the Northern Territory conveys the dual effect of linking youth to cultural traditions, while creating indigenous control over digitised indigenous information (2010). Marett's review of the National Recording Project concerning the digitisation of Aboriginal musical performances discusses the national and local structures involved in the project, access issues, and a commitment to the longevity of the project (2006). These case studies illustrate parallel sentiments raised in articles discussed previously concerning digitised te reo resources. These correlations cement the themes of reciprocity, indigenous self determination and cultural rejuvenation as aspects important to our study of the impact of digital te reo resources.

Capponi (2010) investigates indigenous opinion on research concerning indigenous knowledge. Based on these opinions, Capponi proposes guidelines for digital library assessment that concerns indigenous knowledge. Using a mixture of online surveys and face-to-face interviews, Capponi details ways in which library institutions and indigenous groups can positively collaborate and contribute to digital libraries. Where institutions can provide technical assistance and training, indigenous groups can provide checks on the correctness of indigenous knowledges stored within digital repositories. Reciprocal relationships are an overriding theme within this group of literature (Capponi 2010; Nakata 2007; Marett 2006).

## IMPACT ASSESSMENT

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Ray Lyons provides a trajectory of library assessment starting from program evaluation in the 1950s, outcome evaluation in the 1990s, and now impact assessment (2012). Where outcome evaluation may or may not be dependent on what institutions have provided, impact shows a direct relationship between institutional outputs and changes in the lives of patrons of their resources (Lyons 2015:328). The literature in this section argues that quantifying impact is

difficult and a process in its infancy. Its relative newness as an evaluation paradigm also means a universal method of impact assessment has yet to be prescribed. Our project will address this dearth.

Wavell and colleagues have created a comprehensive literature review concerning impact studies within the memory sector (2002). While substantial literature exists on the topic, they see these examples as starting points for the development of impact assessment. Many articles in this section deal in potential impacts rather than directly measurable ones, highlighting a dearth of practical examples of impact that needs to be filled in the research (Lyons 2012; Durrance 2002; Poll 2003; Wavell 2002).

Roswitha Poll (2003) provides research relating to impacts and outcomes of libraries. She uses the term outcome as a means to convey impact in her article, defining outcomes as "changes in skills, behaviour, knowledge and attitudes of users." (Poll 2003:6). Like other articles concerning impact, Poll recognises the difficulty in verifying impact, particularly in an internet-based age where information is freely available. It can be difficult to pinpoint what benefits are attributable to a particular resource or institution (Poll 2003). Most articles in this section acknowledge that anecdotal evidence gives the strongest sense of impact, particularly from surveys and interviews with users (Poll 2003; Lyons 2012; Marsh 2015; Kanuka 2008). Poll concedes that some feel anecdotal data is subjective when compared to the validity placed on statistical measurement in other assessment modes (2003). Yet she is quick to state that usage does not directly equate with value, so statistical information of use needs to be built on by anecdotal evidence of why people are using certain institutions and their personal experiences of library use to give a fuller picture (2003). Additionally, when filtered through Kaupapa Maori and Maori-centric methodology, oral evidence is shown to be just as valid as any written or statistical form (Ka'ai-Mahuta 2012). As a project concerning indigenous knowledge, using narrative from interviews alongside quantitative evidence will give us the best understanding of the impact of digitised te reo use.

Lyons (2012), and Simon Tanner (2011) provide frameworks for impact assessment of digital resources. Tanner created the Balanced Value Impact (BVI) model - the result of an extensive, interdisciplinary literature review, as well as a workshop concerning impact. The BVI contains a number of steps. It establishes context, produces analysis and design, at which point the design is implemented. Outcomes and results are collected. Information gathered from these steps can be revised any number of times (Tanner 2011). It is a model with a long-term trajectory, visualising regular improvements of resources and systems for the benefit of users through frequent assessment. Similarly, Lyons provides the cyclic model of Suchman (2012:329). It identifies values and principles of the institution and/or users for its starting point. Goals and objectives further the process. Measurements, program design and implementation follow, providing the basis for assessment. Values and principles are then reassessed and processes honed (Lyons 2015). The careful planning and regular reassessment shown in both these processes purports both the complexity of measuring impact and its relative newness.

Furthermore, Tanner identifies five value drivers to further assessment criteria in the BVI model (2011:45). The utility value measures the value that digital resources bring. Existence and prestige value establishes to what extent the resource is "cherished" by internal and external users. Education value measures the sense of culture, learning and knowledge the resource provides. Community value shows community benefit. Inheritance and bequest value establishes the role the digital resource plays in passing down knowledge (Tanner 2011). These frameworks will aid our own methodological approach.

While methods such as those devised by Tanner are useful, Marsh (2015) recognises that many impact assessments thus far have not factored the unique position of cultural and ethnographic impact. Marsh utilises an anecdotal approach for measuring impact within institutions to gain deeper meaning from assessment than just statistical measures of likes, clicks or hits (Marsh 2015). Mythmaking, storytelling, and narrative can help shape future paths of digital collection assessment and inform the development of new collections (Marsh 2015).

Joan C. Durrance and Karen E. Fisher-Pettigrew provide a context-centred evaluation based on scenarios and Vervin's sense-making framework (Durrance 2002:44). Durrance and Fisher-Pettigrew recommend a shift from institutional focuses to user benefits from services. They gathered anecdotal evidence from library staff, asking them to think about how communities and users of library services have benefited from their resources. Though their methodology asks institutions to change their focus to a user perspective, in practice, interviews were still conducted with those representing the institution (2015). Similarly, Kanuka (2008) explores the impact of e-Learning through interviews with fourteen experts. Though these articles were produced in a time when impact assessment was just beginning to be considered, the fact that internal opinions were sought rather than users themselves to measure impacts is problematic. The institutional focus of user impact assessments of these articles, while useful, show there is room for user-focused analysis in impact methodology.

### User-focused assessment

The education sector has provided useful studies regarding student engagement with digital technologies. Measures of engagement in education parallel impact assessment prioritised in the memory sector in that they both necessitate user-focused, qualitative data collection methods. Ocean Mercier and colleagues have investigated student engagement with the digital mapping repository created by Te Kawa a Maui, school of Maori studies students at Victoria University of Wellington (Mercier et.al. 2013). Technology was utilised as a means to retain Maori studentship, creating place-based learning with cultural relevance. Three years worth of data informed this study. Class feedback, an online survey and commentary interviews were used to analyse engagement.

For Mercier et.al (2013), like a number of articles in this literature review, multiple data gathering methods are deemed best for user-focused assessment (Lyons 2012; Poll 2003; Bertot 2004). Hannele Niemi and Jari Multisilta utilised the Global Sharing Pedagogy (GSP) model to investigate student engagement in a digital storytelling project carried out in schools in Finland, Greece, and the United States of America (2015). They adapted the GSP model to measure four mediators: learner driven knowledge and skill creation, collaboration, networking, and digital media competencies. Both studies found collaborative research, creating new knowledge, and a variety of work environments including digital, contributed to student engagement (Miemi and Multisilta 2015; Mercier 2013). Knowledge and skill creation are impacts eventuating from interactions with a resource. Creation of new knowledge and formats using original resources helps show outcomes and impacts of resource use. Videos and digital cultural maps created by students were used to convey information to peers, colleagues and family members (Mercier et.al. 2013; Niemi and Multisilta 2015). Disciplines can be insular in methodology, so it can be refreshing and helpful to get other disciplinary perspectives on similar assessment. In this case, the education discipline and their measures of engagement are helpful for impact assessment in the memory sector due to its user-focused parallels.

### ***Trust assessment***

The *Kiwis Count* survey, initiated in 2007, measures the trust of New Zealanders in the public service. In their December 2015 report they focus on trust data collated for police and Inland

Revenue. Measurements are focused on phone etiquette, response time, and customer satisfaction. While not quite specific to our project motives, its discussion on trust and satisfaction is appropriate, particularly highlighted by this quote from McKinsey and Company within its text:

*Part of the problem is that, despite their best intentions, many governments continue to design and deliver services based on their own requirements and processes instead of the needs of the people they service (McKinsey and Company viewed in State Services Commission 2013:7).*

Our project moves toward user narratives and user experiences of digital te reo collections. In this stance, we prioritise users over institutional providers and their paradigms, creating broader applications to further impact assessments, including those external to the institutions involved in this project. Additionally, a user-focus aligns with kaupapa Maori methodologies and our aims to foster information on trust and use of digital te reo collections. Although it is a statistic-heavy report - rather than the narrative-driven focus of our project, the user-focused sentiments of *Kiwis Count* will inform our direction.

Social cohesion impacts give status to reciprocal cultural understanding. These understandings help create more solid, long-lasting relationships between cultures. Paul Spoonley et. al. discuss how social cohesion provides an acknowledgement and narrative of the imbalance of power between cultures within nations, and is a term that umbrellas discussions that seek to create equity and fairness where it was formerly absent. Paul Spoonley et. al. explore social cohesion in terms of immigrant experiences and investigate immigration policy to explore the degrees to which civic participation equates belonging, and the systemic and individual barriers to inclusion in New Zealand society for immigrants (Spoonley et. al. 2005).

As it relates to digital te reo collections, social cohesion impacts affect the level of use of collections, determined by how trustworthy these resources are perceived to be by users; particularly in this case - Maori users. Mason Durie (2009) looks at education institutions and their abilities to administer socially cohesive settings for Maori. The use of Maori liaisons, specific Maori studies schools and courses, Maori research providers such as Nga Pae o te Maramatanga and the rise of wananga all contribute to heightened recognition of Maori and Maori cultural contributions to the New Zealand education system (Durie 2009). These factors improve Maori participation, trust and sense of belonging within an education system that has historically been guided solely by British notions of knowledge creation and dissemination. As Mason Durie's article, *Towards Social Cohesion*, as well as Paul Spoonley et. al. perspectives on social cohesion impacts show, trust of resources and the providers of these resources are integral to understanding how and why digital te reo collections are used, and by whom.

## Conclusion

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This literature review has provided a basis for our project. Anecdotal evidence centres a user-focused approach to impact assessment within the literature surveyed, creating a starting point for this project. Literature suggests Maori users see digitised te reo resources as an additional benefit to language revitalisation and as learning aids alongside original resources and traditional methods. Furthermore, the correlation between user-focused impact assessment and the need for community involvement in Maori-centric methodological frameworks makes for a solid premise for our project to build upon. The contained articles in this literature review suggest reciprocal and collaborative relationships will procure stronger, long-term results. Cultural aptitude between parties involved in digital resource production and distribution can

help to create trust between users and providers that ensures the continued and increased use of digital te reo collections.

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