

TE TAURA WHIRI
I TE REO MĀORI

MĀORI LANGUAGE COMMISSION



Te Reo Māori Health Vitality Model

Literature scan and 'think piece'

Written by Te Pūtahi Rangahau,
Te Taura Whiri i te Reo Māori

Final Report



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Contents

4 Glossary

6 Whakarāpopoto matua
Executive summary

10 Kupu arataki
Introduction

12 Te whāinga me ngā pātai rangahau
Aims and research questions

13 Section One
How has the health of te reo Māori been assessed
over 20 years, 1998–2018?

28 Section Two
What language health vitality models exist that
could be used for te reo Māori?

40 Kupu whakamutunga
Conclusion

42 References

48 Appendix A



Glossary

Term	Definitions
Elements of Language Planning	Key inter-related areas associated with the revitalisation of te reo Māori (derived from international theory and practice), which include Status Mana; Use Whakamahi; Corpus Puna; Critical Awareness Mārama pū; and Acquisition Ako. ¹
He reo mauriora	The revitalisation and health of te reo Māori.
He Pā Tūwatawata	A fortified village or stockade, and the name of the health vitality model developed by Te Mātāwai for te reo Māori. ² (See Appendix A).
Kaupapa Māori	‘A Māori way’ and related to ‘being Māori’ (Cram, n.d.), entrenched and connected to “Māori philosophy, worldviews, and cultural principles” (Smith, 1997, p.8).
Language vitality model/ health vitality model	A comprehensive framework that describes the health and strength of a language, with multiple factors or elements. (The terms ‘language vitality model’ and ‘health vitality model’, are used interchangeably throughout this paper).
Maihi Karauna	The Crown’s te reo Māori revitalisation strategy being led by Te Taura Whiri i te Reo Māori, in partnership with other government ministries and organisations. The vision of the Maihi Karauna is <i>Kia māhorahora te reo – te reo Māori is used every day, by everyone, in every way, everywhere.</i>
Maihi Māori	Led by Te Mātāwai, the Maihi Māori is the reo Māori revitalisation strategy for iwi and Māori. The vision of the Maihi Māori is <i>Kia Ūkaipō anō te Reo – te reo Māori is acquired in the home as a first language.</i>

1. Te Taura Whiri i te Reo Māori (n.d.). Retrieved from: <https://en.tetaurawhiri.govt.nz/language-planning>

2. Te Mātāwai (n.d.); Te Aka Māori Dictionary. (n.d.). Pā Tūwatawata. Retrieved from <https://maoridictionary.co.nz/search?idiom=&phrase=&proverb=&loan=&histLoanWords=&keywords=pa+tuwatawata>





Term	Definitions
Ngā tohu ora	Health indicators (described in He Pā Tūwatawata).
Te ao Māori / ao Māori	Māori worldview(s) including belief systems, values and customs.
Te Mātāwai	A statutory entity established in 2016 to provide leadership on behalf of iwi and Māori in revitalising te reo Māori.
Te Taura Whiri i te Reo, the Māori Language Commission	A Crown entity set up in 1987 to promote, and expand, the use of Māori as a living language.
Te Whare o Te Reo Mauriora	A metaphor for the partnership between the Crown and Māori – to benefit the future of te reo Māori. It is upheld by the Maihi Māori (led by Te Mātāwai) and the Maihi Karauna (led by Te Taura Whiri i te Reo Māori). The shared aim is <i>Kia Mauriora te Reo – the Māori language is a living language</i> .
Tūāpapa	Levels (as described in He Pā Tūwatawata, a model developed by Te Mātāwai).
ZePA model	This approach to language revitalisation looks at three critical positions of an individual or community on a continuum, to identify factors that enable or hinder language maintenance and acquisition. The spectrum goes from “zero” (no engagement) to “passive” (increased awareness and interest) to “active” engagement and use. The intent is to encourage people to keep shifting right, no matter where they are on the continuum (Higgins & Rewi, 2014).



Whakarāpopoto matua

Executive summary

This paper serves as a ‘think piece’ for Te Taura Whiri i te Reo Māori (Te Taura Whiri), the Māori Language Commission, and help to consider adopting, or adapting, ‘language health vitality models’ to assess the vitality of te reo Māori and to further strengthen Māori language revitalisation efforts. While intended mainly for internal consideration, we wish to share this report of our learning and findings with all supporting the revitalisation and normalisation efforts of te reo Māori and other Indigenous languages worldwide.

The revitalisation of te reo Māori is the aim and shared vision of Te Whare o te Reo Mauriora (the house of the living language), which is a metaphor for the partnership between:

- i. the Maihi Māori (the reo Māori strategy for iwi and Māori, led by Te Mātāwai); and
- ii. the Maihi Karauna (the Crown’s reo Māori strategy for government ministries and organisations, led by Te Taura Whiri).

Five language planning elements³ and the ‘ZePA’ model⁴ form the theoretical underpinnings of the latter, the Maihi Karauna Strategy (Te Puni Kōkiri, 2019). This strategy sets out what actions the government will prioritise and what conditions are needed for te reo Māori to thrive.

A comprehensive health vitality model is not currently used in the Maihi Karauna to measure the overall health of te reo Māori, according to the components outlined and discussed in this paper. Nor is a shared vitality model used to measure the combined efforts across Te Whare o Te Reo Mauriora.

However, there are research studies that have been conducted, with data developed over time, that measure and track the health of te reo Māori. Seven of these studies are discussed in Section One of this paper, in a literature scan – gathering key insights

3. The five language planning elements for Aotearoa are: Status | Mana, Use | Whakamahi, Critical Awareness | Mārama Pū, Corpus | Puna, and Acquisition | Ako. Retrieved from: <https://en.tetaurawhiri.govt.nz/language-planning>.
4. The ZePA model outlines the importance of right-shifting individuals or communities from ‘zero’, to ‘passive’, and then to ‘active’ engagement and reo Māori use, as outlined in Appendix A of the Maihi Karauna. (Higgins & Rewi, 2014).





around how the health of Māori language has been measured over a 20-year period (1998–2018). The elements used in each study to gauge the health of te reo Māori are analysed to determine whether they are robust enough to be applied consistently across future studies of Māori language. Five key insights emerge, ranging from the need for data specificity to the relative importance of one element to another.

In Section Two of the paper, these insights are re-framed as five key considerations when using (or developing) health vitality models. Three such models are analysed against these key considerations (summarised below), to determine whether they could be applied successfully to te reo Māori, in further supporting the efforts of Te Taura Whiri and the Maihi Karauna.

It is important to note that the analysis is guided by Indigenous perspectives and kaupapa Māori approaches, a move away from deficit language framing, towards language vitality (Olsen-Reeder, 2018).⁵ For te reo Māori, this means designing a model that is compatible with kaupapa Māori and te ao Māori. Two language health vitality models are recommended in this paper; namely, ‘He Pā Tūwatawata’ and the ‘UNESCO nine-factor model’.⁶

He Pā Tūwatawata is the preferred model as it is the only model reviewed for this paper that is developed specifically for te reo Māori, from an ao Māori perspective. The UNESCO nine-factor model, an international tool, would supplement He Pā Tūwatawata. The combination of both models, ideally used by both Maihi, would strengthen collective revitalisation efforts and provide support for collaborative measures across Te Whare o Te Reo Mauriora. This joint approach would enable further research and data collection to be clear, concise, and consistently applied – in order to measure progress.

5. Kaupapa Māori is described as ‘a Māori way’, related to ‘being Māori’, and advancing Māori aspirations (Cram, n.d.). This includes applied approaches entrenched in “Māori philosophy, worldviews, and cultural principles” Smith, 1997, p.8).
6. He Pā Tūwatawata was developed by Te Mātāwai (n.d.), the lead for the Maihi Māori. The United Nations Educational, Scientific and Cultural Organization (UNESCO) Ad Hoc expert group of leading linguists developed the nine-factor model for capturing language vitality (Brenzinger et al., 2003).



Summary of five key considerations when using a reo Māori health vitality model

Key considerations emerged from insights gained in a review of seven studies that looked at the health of Māori language, as follows.

01

Primary elements used to assess the vitality of te reo Māori need to be clear and consistently applied.

The main strength of UNESCO's nine-factor model's is that it clearly articulates a robustly designed set of integral elements of language vitality. Moreover, it aligns with the foci of how the health of te reo Māori has been analysed. However, UNESCO's model would need to be adjusted to an Aotearoa New Zealand context e.g. factoring in both Māori medium and English medium education settings; and including a kaupapa Māori perspective. This perspective is provided by He Pā Tūwatawata, across five tūāpapa (levels). Although the model does not explicitly capture each of the nine UNESCO factors, additional measures could be added – or a sub-layer of metrics created.

02

Data across multiple elements need to be gathered – not just proficiency data.

Proficiency data was prioritised by most of the studies reviewed in this paper. Information on other elements is needed. For example, because both the UNESCO nine-factor model and He Pā Tūwatawata prioritise intergenerational transmission, it would be helpful to consider the need to collect better reo Māori data on that element.

03

The relative importance of the elements of vitality needs to be made clear.

In the UNESCO tool, the authors stipulate that each of the nine factors needs to be given prioritisation so that the relative importance of any factor, when compared to another, is fit for any given language. If any of the nine factors is particularly important, or particularly unimportant, this should be clarified. He Pā Tūwatawata provides five tūāpapa (levels) that are key elements of language vitality, from ao Māori perspectives. The structuring of those five levels is important, as it provides a clear flow from the more foundational elements of vitality to the more peripheral ones, according to spheres of influence of Māori and the Crown.



04

Both quantitative data and qualitative data are useful.

Both qualitative and quantitative data can be used to develop a vitality score using UNESCO's nine-factor model. There is built-in flexibility in the tool to capture the best and most relevant data available. However, the outcome of the assessment is a numerical score. In its current form (at the time of writing), He Pā Tūwatawata uses quantitative data exclusively. The over-emphasis on quantitative data could be supplemented with qualitative data e.g. narratives.

05

Data analysis needs to go beyond description – to include meaningful interpretation of the data.

Of the tools assessed, He Pā Tūwatawata is the only one that offers baseline descriptors of metrics related to the revitalisation of te reo Māori (ngā tohu ora, health indicators). As such, the tool is unique and allows for clarity and consistency around how language health is reported – as aligned to the different spheres of influence. This is a real strength of the tool.



Kupu arataki

Introduction

In Aotearoa New Zealand, the Crown plays a significant role in the revitalisation of te reo Māori as mandated by Te Ture mō te Reo Māori (Māori Language Act, 2016) and expressed in government's strategy for te reo Māori (Maihi Karauna). This strategy is complemented by a collective iwi and Māori language strategy, called the Maihi Māori. Both strategies work together to fulfil a shared vision between Māori and the Crown; namely, Te Whare o Te Reo Mauriora, for *te reo to be a living language* (Te Puni Kōkiri, 2019).⁷

The Crown, and its representative body that leads the implementation of the Maihi Karauna, Te Taura Whiri i te Reo Māori (Te Taura Whiri), has not adopted a definitive process or framework that provides a comprehensive analysis of the overall health of te reo Māori.⁸

A central assumption of this paper is that the ability to undertake a useful and rigorous assessment of te reo Māori will support better language planning and policy, aided by the adoption of a language health vitality model. While the learning and recommendations of this report are intended for Te Taura Whiri to consider, we wish to share this report with all supporting the revitalisation and normalisation efforts of te reo Māori and other Indigenous languages worldwide.

Across the globe, governments, academic researchers, communities, and language activists use language health vitality models (health vitality models henceforth) as an effective basis for analysing the state of a language (Grenoble & Whaley, 2006; Landweer, 2000; Obiero, 2010).

7. For an overview of Te Whare o te Reo Mauriora, see <https://en.tetaurawhiri.govt.nz/mauriora>.

8. In terms of the five considerations outlined in the Executive Summary, namely: clear elements that can be consistently applied; multiple measures; relativity in terms of importance; both quantitative and qualitative measures; and analysis of data, with interpretation.





Since the influential work of Joshua Fishman's 'Graded Intergenerational Disruption Scale' (GIDS) in 1991, several health vitality models have been developed. These models have evolved to capture an understanding of the state of individual languages, and their endangerment across the world (Blair & Fredeen, 1995; Brezinger et al., 2003; Crawford, 1995; Crystal, 2000; Dorian, 1981, 1989; Edwards, 1992; Fishman, 2001; Lewis, 2005; Paulston, 1994; Sasse, 1992; Trudgill, 1991). The models typically involve a tool that uses local knowledge to score the language on pre-defined criteria set out in a rubric.

The emergence of these models has helped to capture language loss in a coherent, consistent, and accurate way – such that, over time, there has been a shift to focus on language vitality rather than language death (Mufwene, 2017), alongside associated calls to 'decolonise' language work (Leonard, 2017). In Aotearoa, there are moves to abandon the idea that te reo Māori is a dying language; and instead refocus on understanding the wellbeing of te reo Māori, and how that can be supported (Olsen-Reeder, 2018).

Indigenous language work highlights the importance of collaboration and power-sharing with Indigenous peoples – to curtail the study of languages in isolation of Indigenous peoples, as was the norm in the post-colonial Western world (Czaykowska-Higgins, 2009; Leonard, 2017; 2021; Wiltshire, Bird, & Hardwick, 2022). In Aotearoa New Zealand, Māori language research has been led by Māori. Examples include the advancement of Kaupapa Māori education (Mato, 2024), and the foundations of kaupapa Māori research methodologies (Cram, n.d.; Smith, 1997).

This paper is a 'think piece'. It privileges the call to focus on the wellbeing of te reo and the advancement of Māori aspirations in Māori language revitalisation efforts. Kaupapa Māori approaches and Indigenous language work are emphasised, as they help to inform the analysis of health vitality models for te reo Māori.



Te whāinga me ngā pātai rangahau

Aims and research questions

This paper aims to:

- i. outline the background literature on how the health of te reo Māori has been assessed over a 20-year period (1998–2018); and
- ii. support Te Taura Whiri to consider the benefits of pursuing a health vitality model for te reo Māori – in the context of the awaited government refresh of the Maihi Karauna.

In these two aims, the paper responds to the following research questions:

1. How has the health of te reo Māori been assessed over a 20-year period, 1998–2018?
 - a. What are the strengths of these approaches?
 - b. What are the limitations of these approaches?
2. What tools (language health vitality models) exist that could be used to assess the vitality of te reo Māori?
 - a. How could these tools be maximised for the benefit of te reo Māori?

The paper is organised into two sections, in response to the research questions above.

In Section One, there is a scan of available reo Māori research, where data is presented that provides an assessment of the health of te reo Māori. The purpose of this section is to describe the context for how te reo has been assessed in Aotearoa New Zealand. The strengths and limitations of seven studies are outlined in regard to their assessment of the health of te reo Māori. The purpose of this scan is not to describe the state of te reo Māori per se, but to gain insights on how the vitality of te reo Māori has been assessed over a 20-year period, 1998–2018.

Section Two provides a review of three language vitality models, to examine their potential application to te reo Māori in Aotearoa New Zealand. In the interests of consistent analysis, the insights gained in Section One are re-framed in Section Two as key considerations for Te Taura Whiri when evaluating the utility of such models for te reo Māori. Section Two also highlights the importance of kaupapa Māori approaches.





Section One

**How has the health
of te reo Māori been
assessed over 20 years,
1998–2018?**

The renaissance of te reo Māori in the 1970s instigated a formal systematic research and data collection agenda on the health of te reo Māori. However, the current state of data and knowledge about the health of te reo Māori is mixed. On the one hand, Māori and non-Māori have been instrumental in advocating for, and playing leadership roles in, academic and government studies of the language. As a result, an essential knowledge base (briefly described below) exists to support language revitalisation.

On the other hand, as noted by Olsen-Reeder, Hutchings, and Higgins (2017a, pp. 37-76), it is “...safe to say we know very little about how our language is faring, or whether we are making positive shifts for te reo Māori...[indeed] the most basic enquiries of Māori language revitalisation research... are the ones we have not yet answered and cannot accurately measure”.

Noting the limitations of existing data is not intended to be dismissive, as without this data the loss would be tremendous. Rather, there is value in using data that provides an accurate description of the health state of te reo Māori. That is, there is a significant need for a more robust data system around te reo Māori – to help guide language planning, policy, and revitalisation for Te Whare o te Reo Mauriora.

To help understand the landscape of te reo Māori research and data collection, a categorisation of the different types of research is outlined below. Following this, there is a review of seven studies that have attempted to assess the health of te reo Māori.⁹

► Types of te reo Māori research

There exists a significant body of research with diverse foci about te reo Māori. For instance, research has focused on:

- › language planning and policy (Kāretu, 2014; Mato, 2024; Trinick, May, & Lemon, 2020)
- › schooling and youth (Bright et al., 2021; Hunia, Bright, & Keegan, 2020; Simmonds et al., 2020)
- › the normalisation of te reo Māori in Aotearoa society (Harr et al., 2019; Lee-Morgan et al., 2019)
- › attitudes towards te reo Māori (Te Huia, 2015)
- › intergenerational transmission (Chrisp, 2005; Ormsby et al., 2011; Te Huia, & Maddever, 2022; Olsen-Reeder, 2022)
- › te reo Māori and the economy (Roskrug, Morrison, & Maxwell, 2017)
- › motivation and language acquisition (Te Huia et al., 2019).

9. The review included studies that used multiple elements to assess the health of te reo Māori.

In addition, there are other types of research dedicated to te reo Māori. These include doctoral studies e.g. Hond (2013); Skerrett-White (2003); and key anthologies e.g. 'Te Ahu o te Reo' (Hutchings et al., 2017); 'Te Hua o te Reo Māori' (Higgins, Rewi, & Olsen-Reeder, 2017); and 'Maranga Mai' (Kawharu, 2014).

Cumulatively, these types of studies have been the bedrock of our research knowledge about te reo Māori.

► Public surveys and statistics on te reo Māori

Government entities also collect data, which is important for their contribution to understanding the health vitality of the language. This information is usually in the form of survey-based, statistical data – made available in the public domain. For example, the Ministry of Education provides useful data, such as the number of students in Māori medium education; levels of te reo Māori instruction in primary and secondary schools; and adult participation rates in Māori language education.¹⁰

Te reo Māori proficiency is tracked through a series of publicly funded surveys, such as the National Māori Language Survey: Te Mahi Rangahau Reo Māori; the New Zealand General Census; the General Social Survey; Te Kupenga; and Te Wiki o Te Reo Māori Survey. Aside from measuring proficiency, the survey sets also capture population-level data about public attitudes towards te reo Māori. Furthermore, a small number of the surveys investigate the use of te reo Māori.

Some older research on proficiency remains critically important, such as the seminal work *The Māori Language: Dying or Reviving* by Dr Richard Benton (1997), and the 'Survey on the Health of the Māori Language' conducted by Te Puni Kōkiri (2002).

In addition, two research studies, 'He Ara Poutama mō te Reo Māori' (Nicholson Consulting and Kōtātā Insight, 2021) and 'Kia kaua te reo e rite ki te moa' (Barrett-Walker et al, 2020), have created modelling tools that can be applied to predict the future number of speakers and their proficiency.

► Literature scan of research with a broad assessment of the health of te reo Māori

In writing this paper, and in response to Research Question 1, a literature scan was completed of seven New Zealand studies (published in a 20-year period, 1998–2018). Each study included a broad assessment of the health of te reo Māori. The seven studies were selected because they met a pre-determined criterion; namely, the integration of a comprehensive range of elements.

Five of the seven studies in the scan were large-scale, survey studies. The sixth study was 'Te Ahu o te Reo' (Higgins et al., 2017), which took a kaupapa Māori, case study approach, as a way of understanding community-level language revitalisation. Though not intended to be representative of the Māori population, the perspectives of a variety of communities in that study (differing in

10. A breakdown of various statistics can be found at <https://www.educationcounts.govt.nz/home>.

size, and rurality, for example) provided rich and robust information on many facets of the language. The seventh study was a literature review by Te Puni Kōkiri (TPK) that examined the best existing evidence.

The seven studies are described below, followed by an analysis of the different elements that each used to measure the health state of te reo Māori.

1. The National Māori Language Survey (NMLS): Te Mahi Rangahau Reo Māori (1998)

‘Te Mahi Rangahau Reo Māori’ was conducted in 1995 by Statistics New Zealand, on behalf of Te Taura Whiri and Te Puni Kōkiri (and published in 1998). The specific aim of the survey was to provide baseline information about the state of te reo Māori, at a national level. The resultant report included significant contextual and historical background.

Substantive chapters of the report looked at proficiency, acquisition, use, and attitudes towards te reo Māori – with an overview of key findings. A summary of the descriptive statistics and a general assessment were provided, followed by helpful and practical ideas for policy and planning. For example, there was information about 51.3 percent of the Māori population having low to medium proficiency, with only 8 percent being highly proficient (Waitangi Tribunal, 2011). However, there was no information in the report on what would be required, or desirable, to determine Māori language health.

2. Health of the Māori Language Survey (2002)

The Health of the Māori Language (HML) survey was conducted by Statistics New Zealand for TPK in 2001. The primary purpose of the HML was to describe the state of the Māori language by examining proficiency behaviours, and experiences, among Māori aged 15 years and over.

The survey focused on the status, acquisition, and use of te reo Māori – with an emphasis on proficiency. Because of the quantitative methodology, the resultant report included (almost entirely) a composition of approximately 70 tables of raw data – with no analysis or discussion provided. Examples of tables included: the number of language speakers across a range of proficiency levels, ages, and geographic regions; people with whom Māori speakers communicate (such as family, or co-workers), and to what degree; and participation in Māori language courses.

With this type of quantitative methodology, like many of the studies reviewed in the writing of this paper, understanding the state of te reo Māori is confined to the speaker population. This means that only the speaker (and potential speaker) population can contribute to what constitutes the health of the language. Other possible avenues for understanding language vitality remain closed e.g. how educators evaluate the quality of teaching materials; how language



experts assess accessibility to a strong corpus of the language; or how policymakers navigate the language policy landscape. That is, focussing on the speaker population (although important) is not necessarily the only way to assess elements of language vitality, and acknowledge precisely how language is being assessed in Aotearoa.

Although the HML survey report provided substantial Māori data, the analysis of the data was descriptive in its orientation – as interpretation and recommendations were beyond the scope of the survey. Nevertheless, the report summarised key information and provided key metrics including: proficiency, acquisition, domains, intergenerational transmission, and revitalisation activities in communities. Key indicators were presented as a brief summation of the state of te reo Māori (Statistics New Zealand, 2002); but this did not constitute a robust assessment of the health of the language.

It is worth noting that Te Puni Kōkiri released a Māori language strategy the following year (2003), where the health of the language was framed around the aforementioned key indicators derived from the 2001 HML survey. For examples, the total number of speakers; the number of fluent speakers; and the use of te reo Māori.

3. Te Oranga o te Reo Māori 2006: The Health of the Māori Language in 2006

In 2006, five years after the initial HML survey, Te Puni Kōkiri again administered a survey on the health of Māori language – focussing its data collection on three of five language planning and policy elements¹¹ (i.e. specific factors used to assess the state of te reo Māori); namely:

- › status (the position of the language in society);
- › knowledge and acquisition; and
- › use (including the use of te reo Māori in high-value settings).

No clear information was available for ‘critical awareness’ or ‘corpus’, due to a lack of sufficiently robust measures (Te Puni Kōkiri, 2008). The ability to track elements of language health over time was noted as an emerging feature of the knowledge base around te reo Māori. As in other studies of language health, comparisons were made between Te Puni Kōkiri (TPK) surveys in 2006 and 2001; for example, changes in speaking and listening proficiency. TPK emphasised the importance of developing a critical mass of speakers; however, what constituted a critical mass was not clarified.

The ‘status’ element included an examination of attitudes towards te reo Māori (by Māori and non-Māori), as well as changes in attitudes over time, and the financial investment in the language. No indication was provided on whether the attitudinal measure indicated high or low reo Māori vitality. Notwithstanding, TPK’s report in 2008 did emphasise positive changes in attitudes since the HML survey in 2001.

In investigating the ‘knowledge and acquisition’ element, the TPK report focused on speakers’ various language skills (speaking, writing, reading, and listening) – as well as the number of reo speakers. The report concluded that there were two key drivers of acquisition; namely:

11. Status | Mana, Use | Whakamahi, Critical Awareness | Mārama pū, Corpus | Puna, and Acquisition | Ako. Retrieved from: <https://en.tetaurawhiri.govt.nz/language-planning>

- i. natural learning within homes/communities, and
- ii. the education system.

A primary feature in TPK's reporting of language 'use' was the attempt to understand intergenerational transmission. For instance, statistics were provided for the number of children living in a house with a reo speaker, in terms of the potential for intergenerational transmission in the home. Information on other domains included: places where te reo Māori was spoken; television viewing; and reading in te reo Māori.

TPK's report concluded by noting a general positive trend across three of the elements examined since the first language health survey; status, knowledge / acquisition, and use. The report did express caution, however. It noted that te reo Māori is a minority language with only a small fraction of the country able to converse in te reo Māori, and that intergenerational transmission was in the budding stage.

Overall, TPK's report provided only a general assessment of the health of te reo Māori. For example, no metric was provided about what levels of intergenerational transmission would be desirable, or what level of proficiency would indicate a 'healthy' language. There were goals, such as: "The majority of Māori will be able to speak Māori to some extent by 2028" (Te Puni Kōkiri, 2008, p.9). However, it is unclear if that measure alone would indicate that te reo Māori could be described as being in a healthy state.

4 & 5. Te Kupenga surveys (2013 and 2018)

Te Kupenga is an ongoing survey set administered alongside the New Zealand Census by Statistics New Zealand.

The initial Te Kupenga survey was conducted in 2013, to investigate Māori wellbeing. It used key questions from the Health of the Māori Language (HML) survey in 2002, thereby rendering that survey redundant.

Te Kupenga was last administered in 2018, and the next survey is scheduled for 2028. Like the HML 2001 report mentioned above, Te Kupenga reports contain no interpretation, assessment, evaluation, discussion, or conclusions in relation to the data. Instead, the reports simply present raw data gathered from the surveys.

The questions in Te Kupenga focus on te reo Māori proficiency (in listening, speaking, reading, and writing); language planning by whānau; places where language acquisition occurs; language use in and outside the home; and the domains where language is used. Cumulatively these questions are invaluable, providing a fit-for-purpose set of data focused on language acquisition, proficiency, and use.

The purpose of Te Kupenga (like the HML) is to frame what is important in terms of understanding the health of the Māori language. However, its shortcoming lies in the lack of interpretation or interrogation of the data, which is reportedly outside the scope of Te Kupenga research.



6. Te Ahu o te Reo: Te reo Māori in homes and communities (2017)

‘Te Ahu o te Reo’ was conducted by NZCER, the New Zealand Centre for Educational Research (Hutchings et al., 2017), on behalf of Te Taura Whiri. Its aim was to examine te reo Māori in homes and communities, building on the ground-breaking work of Richard Benton in the 1970s (Benton, 1997).

Community-based methods framed the fieldwork, and interviews were conducted in nine communities – with whānau groups facilitated by pou reo (community leaders and advocates for te reo Māori). The study took a kaupapa Māori approach to understanding te reo Māori.¹² As such, there was a de-emphasis on assessing the vitality metrics of just the language itself. The focus was more on framing what the community had to say about te reo Māori, which was made possible due to kaupapa Māori research methods.

In terms of language elements, the community-based study focused on: the use of te reo Māori; the factors that enabled and constrained the choice to use Māori language in a variety of contexts (such as home, school, and work); language acquisition for children and adults; and the relationship between education systems and acquisition.

The study also looked at community-level responses to revitalisation, rather than what individuals were doing. For example, how communities were responding to challenges in a way that aligned with te ao Māori perspectives. In the synthesis of the data, each pou reo and participating whānau member had the opportunity to share their own community’s story of te reo Māori, and for them to be recorded in the report.

Other specific elements were also addressed such as: reo ōpaki (informal language); the distinction of first language speakers; mita and reo ā-iwi (regional and tribal variations).

7. Literature Review: Perceptions on the Health of the Māori Language (2018)

Te Puni Kōkiri undertook a literature review to provide an in-depth analysis of the health of te reo Māori (Hardman, 2018). The review had a particular focus on examining language loss, and the factors that influence loss. Unlike the six other studies already mentioned in this paper, the use of existing literature was the basis for TPK’s information about the health of te reo Māori.

Several elements associated with the health of the language were covered in the literature review. Two of these elements are discussed below, in the context of language vitality; namely, intergenerational transmission and acquisition.

Firstly, the literature review outlined Ethnologue’s assessment of the state of te reo Māori in 2015, where te reo was placed at Level 6b on the Expanded Graded Intergenerational Disruption Scale (EGIDS). This means, according to the EGIDS, that te reo Māori was

12. In addition to definitions provided earlier, the authors note that “kaupapa Māori has a particular focus on research as a process of transformation...that comes with specific cultural expectations such as the active participation of, and control by, Māori within all aspects of the research” (Hutchings et al., 2017, p.4).

in a threatened and vulnerable state, as only some of the child-bearing generations were transmitting the language to their children (Hardman, 2018). That is, te reo Māori was not safe, nor was it a natural and widely used language in Aotearoa.

However, UNESCO (United Nations Education, Scientific and Cultural Organisation; Moseley, 2010) deemed that te reo Māori was neither 'definitely' endangered,¹³ nor 'critically' endangered¹⁴ – albeit vulnerable. This view substantiated other assessments (Benton & Benton, 2001).

Secondly, the literature review provided useful insights on the emergence of Kōhanga Reo, as a critical conduit for acquisition – especially where the potential to acquire te reo in the home was limited. The review discussed the rapid growth of kōhanga, their later decline, and their current state of being small but stable.

The review also canvassed priorities like revitalisation (especially the number and proficiency of speakers); the extent of language planning and policy; funding of mainstream and Māori-medium education systems; and dialects. These additional priorities were positioned as key elements associated with the health of Māori language. However, the health of each of the elements was not assessed.

The intent of TPK's literature review was not to use the literature to provide an assessment of the state of te reo Māori, but rather to understand the elements such as the key inter-related areas associated with the revitalisation of te reo Māori (as derived from international theory and practice).

► Discussion of te reo Māori research and data (in the seven aforementioned studies)

Based on the aforementioned scan of seven studies, we can see that (with the exception of 'Te Ahu o te Reo Māori') the health state of te reo Māori has generally been assessed through population-level-based survey data – where quantitative tables are produced, based on information gathered from individuals on the different elements of te reo Māori.

The development of planned and structured longitudinal research, where data can be compared over time, would be beneficial for contributing to the revitalisation of te reo Māori. Table 1 below summarises the primary contributions (and limitations) of each of the seven studies reviewed, in terms of understanding language vitality – as well as understanding the original purpose of the studies, and the methodologies used.

13. Children no longer learning the language as a mother tongue.

14. Youngest speakers are grandparents or older, speaking the language partially and infrequently.



Table 1: Summary analysis of vitality assessments of te reo Māori from 1998 to 2018

Title and author(s) The National Māori Language Survey (NMLS) – Te Mahi Rangahau Reo Māori (1998). Report prepared by Te Puni Kōkiri.	Purpose To examine: › The reo proficiency of speakers. › How Māori language was acquired. › The frequency and location of Māori language use. › Attitudes towards te reo Māori.	
Methodology	Primary contributions	Limitations to understanding language vitality
Quantitative survey of the Māori population. Examination of a wide variety of language elements.	Provided an ad hoc, contemporary, fit-for-purpose raw data set for the national population (which was ground-breaking for te reo Māori data). Included policy recommendations based on the data.	No synthesis of data in the analysis e.g., no integration of the multiple datasets. Only a broad-level assessment of the health of the Māori language.
Title and author(s) Health of the Māori Language Survey (2002). Report prepared by Statistics New Zealand, for Te Puni Kōkiri.	Purpose To statistically describe the state of the Māori language by examining: › language proficiency; › behaviours; and › experiences.	
Methodology	Primary contributions	Limitations to understanding language vitality
Quantitative survey of the Māori population. Examination of a wide variety of language elements.	Provided a fit-for-purpose, raw dataset at a national population level, on a range of elements. Reported on 3 elements of language planning (i.e. status, acquisition, and use), but not corpus and critical awareness – as there was no data to report. Emphasised proficiency (e.g. approximately half the questions related to proficiency). Allowed for a basic assessment of intergenerational transmission.	Descriptive study only – such that analysis, interpretation, and meaning or the implications of the results were beyond its scope. No synthesis of data. No assessment of the health of the Māori language. No assessment on the vitality of any of the metrics gathered.

Title and author(s) Te Oranga o te Reo Māori 2006: The health of the Māori language in 2006. Report prepared by Te Puni Kōkiri.	Purpose To statistically describe the state of Māori language, by examining five elements of language planning and policy: › status, › knowledge and acquisition, › use, › corpus, › critical awareness.	
Methodology Quantitative survey of the Māori population. Examination of a wide variety of language elements. Inclusion of historical data analysis.	Primary contributions Provided fit-for-purpose data (including evaluation of metrics over time). Focused on status, acquisition, and use. Emphasised proficiency (e.g. approximately half the questions related to proficiency). Allowed for a basic assessment of intergenerational transmission. Provided a broad assessment about the state of te reo Māori. Solidified the five elements of language planning as the approach to frame future reporting of data.	Limitations to understanding language vitality Only a broad assessment of the state of te reo Māori. Little detail, interpretation and clarity e.g. around the health of the five elements associated with language planning and policy (i.e. status; acquisition, corpus, use, and critical awareness). No information provided on the meaning or the implications of the metrics, with regards to the vitality of Māori language.

Title and author(s) Te Kupenga Surveys (2013 and 2018) Report prepared by Statistics New Zealand.	Purpose To investigate the many facets of Māori wellbeing (including language data).	
Methodology Quantitative survey of the Māori population. Examination of different language elements. Inclusion of historical data analysis.	Primary contributions Built on HML data (2001) and enabled diachronic monitoring of te reo Māori re how te reo has evolved over time. Focused on status, acquisition, and use – with emphasis on proficiency (e.g. approximately half the questions related to proficiency). Allowed for a basic assessment of intergenerational transmission. Provided basis for language data to be systemically gathered (with Census).	Limitations to understanding language vitality Descriptive study only – such that further data analysis, interpretation, and meaning or the implications of the results were beyond its scope. No synthesis of the data, nor any assessment of the health of the language. No information provided to assess the vitality of any of the metrics gathered.

Title and author(s) Te Ahu o te Reo: Te reo Māori in homes and communities (2017). Report prepared for Te Taura Whiri i te Reo Māori by the NZ Council for Educational Research, in partnership with Victoria University.	Purpose To examine te reo Māori in homes and across nine communities.	
Methodology Indigenous participatory methodologies; kaupapa Māori. Mixed methods i.e. surveys, interviews, and case studies. Collaboration and data gathering in nine communities. The rangahau team worked alongside community researchers and pou reo, to gain rich insights (rather than generalised data).	Primary contributions Focused on the degree of language use, as well as the barriers and enablers of language choice, in and beyond the home. Examined the relationship between education systems (English medium and Māori medium) and intergenerational transmission. Emphasised Māori agency, enabling Māori voice and experience to be captured when reporting on te reo Māori. Emphasised community responses to language revitalisation, rather than contacting individuals about their language engagement. Posed the question about how to incorporate qualitative data alongside existing quantitative assessments of te reo Māori. Looked at language patterns and practices in the home.	Limitations to understanding language vitality An overarching assessment of the health of te reo Māori was outside the scope of this study. Instead, the focus of the study was on gathering insights e.g. identifying enablers of communication in te reo Māori.

Title and author(s) Literature Review: Perceptions of the Health of the Māori Language 2015. Report prepared in 2018 by Anne Hardman for Te Puni Kōkiri.	Purpose To provide a broad, in-depth analysis of the health of te reo Māori – including language loss.	
Methodology Qualitative literature review, examining a variety of language elements.	Primary contributions Discussed the 6b result on the Expanded Graded Intergenerational Disruption Scale (EGIDS). Emphasised the importance of Kōhanga reo. Provided a good review of language planning and policy; education; and Māori dialects. Synthesised what is known, and key learnings. Focused on important lessons regarding language elements.	Limitations to understanding language vitality Lack of detailed analysis regarding language vitality. No assessment of te reo Māori vitality among key learnings. No detailed basis provided to assess the vitality of any of the metrics gathered.

► **Five key insights gained from analysing seven studies (1998–2018)**

The seven studies reviewed in this paper provide five key insights around how the health of te reo Māori has been assessed over a 20-year period (1998–2018).

1. A set of primary elements of language vitality are used to assess te reo Māori but these elements are not clear, nor consistently applied.

The elements of primary importance to language vitality, as outlined by the studies above, include:

- a. Proficiency and the speaker population
- b. Intergenerational transmission
- c. Language attitudes
- d. Language policy, planning, and investment
- e. Māori medium, English medium, and adult education systems
- f. Language use
- g. Language domains
- h. Dialectic or regional variations

The studies fall short in explaining precisely what is, or is not, worth emphasising in terms of the key elements of language vitality. Although five key language planning elements (status, use, acquisition, corpus, critical awareness) feature in some of these studies, the framework is broad. This means that different metrics can be easily prioritised or de-emphasised at different points in time, thus affecting consistency. Moreover, the five elements of language planning and policy do not, on their own, provide a clear framework for what constitutes language vitality.

2. There is an overemphasis on proficiency data and, conversely, a lack of data on other elements (such as language use).

There is a clear emphasis on proficiency questions as the primary way to assess the size of the speaker population. In some instances, there are explicit and direct policy statements suggesting that the size of the speaker population is the primary indicator of language vitality (Te Puni Kōkiri, 2014; 2023).¹⁵ Such emphasis creates a powerful assumption that proficiency is the ‘de facto’ indicator of the health of te reo Māori. This way of thinking can be seen in the focus on proficiency across the seven studies reported in this paper e.g. the high frequency and number of questions about proficiency; and the emphasis on proficiency when reporting and discussing the findings. This is particularly so when the study is quantitative and examines population-level data.

The emphasis on speaker populations and proficiency has undergone critique. Olsen-Reeder, Hutchings, and Higgins (2017b) are clear in their research that there is an over-reliance on these measures to

15. For instance, in 2014, Te Puni Kōkiri noted that there were two primary indicators of language vitality; namely, the number of speakers, and the attitudes of New Zealanders towards the Māori language. And, in 2023, Te Puni Kōkiri released a Long-term Insight Briefing that emphasised two indicators of te reo Māori; namely, the number of speakers, and intergenerational transmission.

inform the health of the language. The de facto focus on speaker population comes with the inherent belief that raising the number of people who (report that they) speak Māori equates to language health. Olsen-Reeder et al. (2017b) argue that:

- i. without a target or reference point to compare the speaker population size against, it essentially renders the numbers 'irrelevant'; and
- ii. we do not know precisely the amount of te reo Māori that people know, use, or pass on to others – nor where this may occur.

As noted above, a clear indication of what constitutes vitality is the logical pre-condition for knowing what data is needed about the health of the language. Currently, this information is non-existent.

3. The relative importance of the elements of vitality is not made clear across the studies.

The studies reviewed in this paper were not precise in outlining the relative importance of each of the language planning and policy elements that were considered. It is difficult to distinguish whether all elements are of equal importance, or whether some are more important than others. The EGIDS positions intergenerational transmission as the key factor in language vitality, but it is not clear if this is the position taken across the seven studies above, in the case of te reo Māori. For instance, to determine the state of Māori language, is understanding intergenerational transmission less/ more important than, or equally important to, knowing about proficiency?

The same could be said about the influence of education systems, the strength of the corpus, or the positivity of attitudes to te reo Māori. How, for example, would the successful development of intergenerational transmission over the next two decades compare with the expansion of positive attitudes to te reo Māori over the same period?

It needs to be made clear whether these elements impact vitality equally; or whether certain elements should be prioritised – and to what degree? Whatever the agreed prioritisation of elements, it is imperative that they are applied consistently across all studies and data collection methods. In addition, these elements need to be considered in the context of te ao Māori.

4. There is an emphasis on quantitative data, with a corresponding lack of qualitative data.

No compelling argument has been made as to why qualitative data should not be prioritised in an assessment of the health state of a language. In most of the seven studies described in this paper, the emphasis is on quantitative data. But, looking at the number of homes practising intergenerational transmission may preclude a more fulsome understanding of language vitality. The hypothetical example below, comparing the experiences of three 8-year-olds, illustrates this point.

One 8-year-old has just begun being spoken to by a beginner speaker of te reo Māori, with regularity, in the home. The second 8-year-old has only known the 'one-language one-parent' model – with a parent who is an intermediate-level te reo Māori speaker. The third 8-year-old has two fluent parents who use te reo Māori as the sole language in the 8-year-old's life.

*All three scenarios are broadly defined examples of intergenerational transmission. It would be useful, however, to examine the **quality** of the intergenerational transmission – to help determine the respective impacts of each situation on the overall health of the language.*

The community study, 'Te Ahu o te Reo', used a kaupapa Māori approach to provide rich qualitative information about the existence of intergenerational transmission in whānau where te reo Māori is present. Further discussion is needed about gathering qualitative data alongside quantitative data. Although this may present challenges, it is worth pursuing, particularly for te reo Māori and other Indigenous languages.

5. Description of data exists, but there is an absence of analysis in regard to the interpretation/meaning of the data.

While the studies include descriptions of te reo Māori, there seems to be a reluctance to assess and interpret the data in a meaningful way. Overall, it is not clear what the quantitative data mean in relation to the revitalisation of te reo Māori.

A reference or target point would prove useful. For instance, the 2021 General Social Survey stated that 23 percent of Māori can speak te reo Māori 'fairly well', or better. However, what does 23 percent tell us? It raises questions. For example: Is 23 percent good, bad, devastating, or promising? How do we compare those who speak 'fairly well' to those who are beginners, or are fluent? Do we need to consider how many of this group are first or second language learners? Should we concern ourselves with that distinction? Why/why not?¹⁶ To what extent do we value the proficiency of speakers with limited knowledge, or use, of te reo Māori?

Such questions highlight that it is not possible to make assessments without a framework or yardstick to guide analysis. That is, it is important to interpret the data meaningfully against reference points associated with the health of Māori language; such reference points are, in the main, largely absent in the seven studies reviewed.

Examining policy goals for te reo Māori is of value, with regard to established reference points, but this alone does not suffice. For instance, the Crown currently has three primary goals for te reo Māori, one of which is to have one million basic speakers in Aotearoa by 2040. If this goal is achieved, can we say te reo

16. Lane (2024) argues that understanding 'first' versus 'second' language speakers has been under-estimated – which has created a 'flawed' Census question about conversational ability in te reo Māori.

Māori is revitalised? If so, why? If not, why not? What does that goal achieve – and is it an important milestone? If so, how does that milestone relate to the vitality of te reo Māori? No clear policy statement exists on these issues. Thus, while goals can provide good information about the priorities of policy work, they are not in and of themselves clear reference points for the vitality of the language.

► Section One Conclusion

From the seven studies reviewed above, key strengths and limitations are outlined (in Table 1) as to how the health of te reo Māori has been assessed over a 20-year period, 1998-2018. Of particular consideration is the importance of having clear and consistent measures, and qualitative data, within a kaupapa Māori framework. To understand the potential that language vitality models have in addressing these considerations, and to support a fulsome assessment of the health of te reo Māori, three selected health vitality models are reviewed in Section Two below (in response to Research Question Two).



Section Two

**What language health
vitality models exist
that could be used for
te reo Māori?**



The significance of a home-grown model for understanding Māori language vitality cannot be understated.

Academic disciplines, most notably linguistics, have made significant contributions to the activities that revitalise Indigenous languages. However, Indigenous scholars and communities have noted that linguists have at times inserted their assumptions, knowledge, and values in a way that can overtake and inhibit the contributions that a community can make towards knowing their language situation (Czaykowska-Higgins, 2009; Stebbins, 2014). Thus, it is worth considering what constitutes productive collaboration between Indigenous peoples (and their knowledge), and academic disciplines (Leonard, 2021).

An example of the tension between knowledge systems is the issue of understanding revitalisation in the context of being more than just a language. Indigenous peoples often prefer a more holistic perspective, rather than a narrow view, of what constitutes language revitalisation (Leonard, 2017). Grenoble and Whaley note that Indigenous peoples often emphasise “the empowerment of language users, or potential language users, [rather] than the language per se” (2021, p. 26).

Indigenous communities, like some linguists, prefer the inclusion of ‘extra-linguistic’ elements in their understanding of revitalisation. The importance of including elements that Indigenous Peoples value (such as identity and its transmission; culture and its transmission; and community wellbeing) are all worth considering (Wiltshire, Bird, & Hardwick, 2022). Furthermore, these elements align well with kaupapa Māori. Such important, complex issues require attention when considering a health vitality model for te reo Māori.

► Language health vitality models

Several works exist that provide frameworks for assessing language vitality, each bringing valuable insights to the issue. For example, Landweer (2000) provides eight indicators of ethnolinguistic vitality. A strength of this work is that understanding a language goes hand-in-hand with understanding the associated cultural group – rather than viewing the language as an isolated entity. Further, Crystal (2000), Obiero (2010), and Yamamoto (1998) each provide contributions that specify elements that are essential foundations for language progress. Some of their key ideas include: enhancing a strong sense of ethnic identity in the community; creating, and adapting to, new environments for language use; and providing quality educational systems, teachers, and educational materials.

More recently, Grenoble and Whaley (2021) have begun looking at language vitality as a social process, where the wellbeing of the community is woven deeply into the meaning of language vitality.

The development of a variety of models is very useful. However, the purpose of this paper is to explore potential options for use in Aotearoa, as applied to te reo Māori. As such, a review of potential options of language vitality models guides the following section of this paper (rather than a synthesis of the literature) – underscored by the overarching importance of kaupapa Māori.

Limitations of language health vitality models

Before reviewing the models outlined below, it is important to note the limitations of language health vitality models, as well as the call to decolonise language work (Leonard, 2017). Language planners, policymakers, and bureaucrats often desire language vitality information to directly support language planning. However, in many cases, vitality models do not provide a detailed explanation as to why, for example, a particular measure determines a level of language vitality. Nor is there clear guidance on where policy needs to be prioritised moving forward (Grenoble & Whaley, 2021).

An assessment of the efficacy of revitalisation efforts and the vitality of the language would be highly desirable additions in language research (Obiero, 2010). Vitality models have been criticised if they provide a static view of the language, rather than a trajectory – which is significant in the revitalisation of a language (Obiero, 2010). Despite these shortcomings, the potential of three language vitality models is discussed below.

Criteria for selecting three language vitality models

Three language vitality models are reviewed below; namely, the ‘UNESCO nine-factor model’; the ‘Expanded Graded Intergenerational Disruption Scale (EGIDS)’; and ‘He Pā Tūwatawata’.

The first two have been developed using robust understandings of language change. Moreover, they have been lauded for assessing language vitality across the world (Obiero, 2010; Grenoble & Whaley, 2006). Unlike the first two models, He Pā Tūwatawata is a new model. As such, no reports on the use of the tool have been published. Indeed, some health indicator metrics in the model are not yet finalised.¹⁷ However, He Pā Tūwatawata has been developed in the context of te ao Māori, by an authority on language revitalisation in Aotearoa; namely, Te Mātāwai (the organisation that leads the Maihi Māori, the Māori language revitalisation strategy for iwi and Māori).

17. The model is fully developed, but some of the indicators used to measure language health have not been identified. Thus, a full assessment using the model is not yet possible.



► UNESCO nine-factor model

In 2003, the United Nations Educational, Scientific and Cultural Organization (UNESCO) created an Ad Hoc expert group of leading linguists from across the world to develop a new methodology for capturing language vitality; the nine-factor model (Brenzinger et al., 2003). The tool's purpose was to support the maintenance, revitalisation and status of languages – as well as language planning and policies (Brenzinger et al., 2003). The model has a sound theoretical platform (Lewis, 2005). Furthermore, it has been used and critiqued by many researchers, including Florey (2009); Grenoble and Whaley (2006); Legère (2007); Lewis (2009); and Maffi (2005). The Aboriginal and Torres Strait Islander Studies group in Australia have also used the UNESCO nine-factor model as the foundation of their National Surveys (conducted in 2005, 2014, and 2020), which represent the main national-level language data sources in that country.¹⁸

The tool itself is a survey with questions focused on nine key factors for language vitality. The integration of the numerous factors related to language is highly useful for understanding language vitality. The nine factors are as follows:

1. Intergenerational language transmission
2. Absolute number of speakers
3. Proportion of speakers within the total reference population
4. Loss of existing language domains
5. Response to new domains and media
6. Materials for language education and literacy
7. Governmental and institutional language attitudes and policies
8. Community members' attitudes towards their language
9. Amount and quality of documentation

The UNESCO tool grades the factors on a 1 to 5 scale. By way of example, the scale for Factor Three (the proportion of speakers within the total reference population) is provided in full in Table 2 below. As is shown, a useful and easily graded categorisation is possible – albeit with very broad descriptors.

Each factor-specific score (except for Factor Two, the absolute number of speakers) is tallied up to give a score.¹⁹ If each factor is considered to be of equal importance, there is a possible total score of 40 for language vitality.

Intergenerational transmission is noted as the main factor. However, UNESCO is very clear that no single factor alone can be used to assess vitality. In other words, capturing data on multiple elements, and interpreting various measures together, will give the most robust assessment of vitality.

18. For example, see the Australian Government's National Indigenous Languages Report. <https://www.arts.gov.au/what-we-do/indigenous-arts-and-languages/indigenous-languages-and-arts-program/national-indigenous-languages-report>.

19. Factor Two is the exception, as it uses the absolute number of speakers in the population. This can only be interpreted in a local context; and therefore, does not have pre-determined numbers indicating strength.

Table 2: Grading table for Factor Three: the proportion of speakers within the total reference population

Degree of Endangerment	Grade	Proportion of Speakers Within the Total Reference Population
Safe	5	All speak the language
Unsafe	4	Nearly all speak the language
Definitively Endangered	3	A majority speak the language
Severely Endangered	2	A minority speak the language
Critically Endangered	1	Very few speak the language
Extinct	0	None speak the language

► **Expanded Graded Intergenerational Disruption Scale (EGIDS)**

In 1991, Joshua Fishman developed the GIDS, where languages were categorised on a scale of eight stages. The main emphasis was on the degree to which intergenerational transmission was inhibited. Lewis and Simons (2010) later developed an expanded, more detailed version of the scale (EGIDS), by building on the insights provided in the UNESCO nine-factor model.

The EGIDS model outlines 13 scales and accounts for more variation in language vitality. Table 3 below charts these stages (Lewis & Simons, 2010, p. 28). There are five key considerations that guide the assessment of vitality:

1. The identity function of the language
2. The official use of the language
3. Parents' transmission of the language to their children
4. Levels of literacy
5. Knowledge about the youngest generation of proficient speakers.

Table 3: Expanded Graded Intergenerational Disruption Scale (EGIDS)

Level	Label	Description	UNESCO
0	International	The language is used internationally for a broad range of functions.	Safe
1	National	The language is used in education, work, mass media, and government at a nationwide level.	Safe
2	Regional	The language is used for local and regional mass media and governmental services.	Safe
3	Trade	The language is used for local and regional work by both insiders and outsiders.	Safe
4	Educational	Literacy in the language is being transmitted through a system of public education.	Safe
5	Written	The language is used orally by all generations and is effectively used in the written form in parts of the community.	Safe
6a	Vigorous	The language is used orally by all generations and is being learned by children as their first language.	Safe
6b	Threatened	The language is used orally by all generations, but only some of the child-bearing generations are transmitting it to their children.	Vulnerable
7	Shifting	The child-bearing generation knows the language well enough to use it among themselves, but none are transmitting it to their children.	Definitely Endangered
8a	Moribund (Declining)	The only remaining active speakers of the language are members of the grandparent generation.	Severely Endangered
8b	Nearly Extinct	The only remaining speakers of the language are members of the grandparent generation, or older, who have little opportunity to use the language.	Critically Endangered
9	Dormant	The language serves as a reminder of heritage identity for an ethnic community. No one has more than symbolic proficiency.	Extinct
10	Extinct	No one retains a sense of ethnic identity associated with the language, even for symbolic purposes.	Extinct

The five additional levels provided in the EGIDS enable a more fine-grained analysis. The scale allows for the important distinction between vigorous languages that are safe (6a in the table), and languages that are vulnerable due to minimal intergenerational transmission (6b in the table). The EGIDS enables many more languages across the world to be represented more accurately on the scale – which allows for more effective comparability across languages. However, this is not a primary need in terms of Māori language.

Note, there are some weaknesses in the EGIDS tool, in that it does not sufficiently consider absolute (or relative) speaker numbers; or attitudes towards language; nor the institutionalisation of language planning and policy (Dwyer, 2011). Moreover, the EGIDS model does not require regular monitoring, which is problematic for long-term use. For these reasons, this model is less useful for Māori language.

► He Pā Tūwatawata

The third model for consideration in this paper was published by Te Mātāwai (n.d.). It is promising because it was developed for the context of te reo Māori in Aotearoa New Zealand. At the time of preparing this paper, there are no public examples of the tool being implemented. Nonetheless, the conceptual bedrock of the tool is illuminating and highly productive for understanding te reo Māori vitality, from ao Māori perspectives.

The model's name (and inherent concept) comes from a pā tūwatawata, a traditional fortified village with palisades and descending levels of protection.²⁰ At its core is a foundational tūāpapa (level). Each of the four subsequent levels of the 'village' protects the level that precedes it. This metaphor is applied to te reo Māori (as in Appendix A, an image of the model).

The five tūāpapa consist of:

1. Tuakiri | Collective identity.
2. Pātaka Reo | Corpus.
3. Whakatipuranga | Intergenerational transmission.
4. Whakaako | Education and literacy, and
5. Whakanui | Community and National Support.

The sequence of elements places the most foundational elements first; like building blocks stacked on one another, so that the presence of any level is dependent on those that rest under it. As such, the existence of Level 1 and 2, tuakiri (collective identity) and pātaka reo (corpus), are necessary prerequisites for the subsequent three levels. Intergenerational transmission (Level 3) is possible with the first two layers in place but is not inherently dependent on the existence of formal education systems (Level 4) or wider society support (Level 5).

The incorporation of the elements related to culture and community, in understanding the revitalisation of te reo Māori, is evident across all five tūāpapa (levels). This provides a model that empowers and enhances kaupapa Māori approaches. To reiterate, all levels are particularly important pillars of what constitutes language vitality. However, the relationship across each element places some as foundational to others.

20. Te Aka Māori Dictionary. (n.d.). Pā tūwatawata. Retrieved from <https://maoridictionary.co.nz/search?idiom=&phrase=&proverb=&loan=&histLoanWords=&keywords=pa+tuwatawata>

Key considerations of the Pā Tūwatawata model

The sequencing of the five tūāpapa in the Pā Tūwatawata model is deliberate and achieves two main outcomes. First, having five distinct tūāpapa means that progress on one level is not necessarily dependent on any other. This is different to the EGIDS model, which requires the conditions of one level of vitality to be met before further levels are attainable. However, this pre-condition can inhibit our understanding of language development. For example, advancements in Māori medium education may be happening without changes in intergenerational transmission. The approach of He Pā Tūwatawata enables multiple pathways for tracking vitality.

Secondly, the ordering of the five levels stems from a critique of five existing language planning and policy elements currently used by Te Taura Whiri i te Reo Māori and Te Puni Kōkiri.²¹ There is currently no evident relationship between how the five elements are framed. Consequently, there is no clear beginning point for understanding the process of revitalisation. The ordering of the relationship between the tūāpapa of He Pā Tūwatawata addresses this weakness (Te Mātāwai, n.d.).

One of the aims of the tool is to analyse the role of Māori and non-Māori in the revitalisation process of te reo Māori in Aotearoa – to ensure that these differences, as outlined in the strategy of Te Whare o te Reo Mauriora, feature in the model (Te Puni Kōkiri, 2019). Specifically, the sphere of influence on the left-hand side of the model (see Appendix A) attends to this. Level 1 (Tuakiri) is primarily under Māori influence, but this influence decreases at each tūāpapa through to Level 5 (Whakanui). Conversely, government influence is minimal at Level 1 (Tuakiri) but becomes increasingly significant through each level up to Level 5 (Whakanui), where its influence is significant.

Another feature of He Pā Tūwatawata is that there are 'tohu ora', indicators of health assigned to each tūāpapa. There are typically six to eight indicators for each tūāpapa. While general metrics are evident in other language vitality tools, the use of specific metrics (including data sets) in He Pā Tūwatawata provides precise data points to assess the vitality of each tūāpapa. For example, at Level 4 (education and literacy), the Ministry of Education could provide data around the percentage of education institutions that deliver Māori medium education aimed at tamariki in the early years. Each metric could be assigned a tohu ora (health measure) classification such as 'low', 'developing', or 'good'. If less than 25 percent of early education providers offered Māori medium education, it would be classified as 'low'; above 25 percent would be 'developing'; and above 50 percent would be considered 'good'. This is a useful approach, as it not only identifies a way to measure vitality, but it allows for the interpretation of metrics – because there is a consistent reference point (tohu ora) that outlines what the metric means for the vitality of te reo Māori.

21. The five elements are: status, corpus, acquisition, critical awareness, and use.

► **Discussion on how these models could be used to assess the health of te reo Māori**

A review of the above three models points to the potential for Te Taura Whiri to use, or be informed by, existing health vitality models. All three models provide a consistent and coherent framework for understanding language vitality, with procedures for implementation. Moreover, each model has a particular emphasis on intergenerational transmission being central to language vitality.

However, although the EGIDS is a well-informed and rigorous tool, it has weaknesses (as discussed previously). The remainder of this paper will therefore focus on the potential of the other two models to be used by Te Taura Whiri; namely, the UNESCO nine-factor model, and He Pā Tūwatawata.

To guide the discussion, we return to the five insights that emerged from the earlier scan of seven studies (in Section One). These insights are now re-framed (below) as five key considerations when assessing the health of Māori language in the context of kaupapa Māori approaches and perspectives.

► **Five key considerations when using health vitality models**

1. Primary elements used to assess the vitality of te reo Māori need to be clear and consistently applied.

The biggest strength of UNESCO's nine-factor model's is that it clearly articulates a robustly designed set of integral elements of language vitality. Broadly speaking, the nine factors align with the foci of how the health of te reo Māori has been analysed, as outlined in Section Two above. The nine-factor model could provide necessary clarity and consistency.

The nine-factor model would need to be adjusted to an Aotearoa New Zealand context, however. For instance, Factor Six (materials for education and literacy) would need to be refocused on both the Māori medium and English medium education systems, to accommodate the New Zealand context.

In addition, further analysis and consideration of the factor associated with the loss of existing language domains would need to be re-framed from a kaupapa Māori perspective, as we shift our focus towards the wellbeing of te reo Māori (Olsen-Reeder, 2018). Other adjustments may also be necessary. However, in broad terms, there would be value in using UNESCO's nine factors.

He Pā Tūwatawata is useful for understanding the vitality of te reo Māori, as it provides a definitive and consistent approach to capturing language vitality across five tūāpapa (levels), from a te ao Māori perspective. Although He Pā Tūwatawata does not explicitly capture each of the nine factors, additional measures could be added to the framework to align with a Maihi Karauna perspective.

Another point worth considering in He Pā Tūwatawata is that Levels 4 and 5 (Whakaako and Whakanui respectively) relate specifically to the Maihi Karauna. Te Tāhuhu o te Mātauranga, the Ministry of Education, has a strong relationship with Level 4; and the mandate of Te Taura Whiri has a strong resonance with Level 5. There is a

possibility of Te Taura Whiri expanding and building onto this general model at Level 5, with a sub-layer of metrics and elements related to the national context. In this way, He Pā Tūwatawata could be applied across the motu – in addition to te ao Māori.

2. Data across multiple elements need to be gathered – not just proficiency data

As noted earlier in Section One, proficiency data were prioritised by most of the studies reviewed in this paper. Consequently, other data were deprioritised. This would likely be rectified if a model of vitality was used, as it would shape which data is pursued. Ideally, the amount and quality of data should correlate with relative emphasis in the model. In this way, any thorough model would provide good direction and consistency in terms of which data are a priority. Conversely, the absence of data would be highlighted, if there were no data available to respond to the model.

The absence of clarity on what constitutes vitality, from ao Māori perspectives, creates huge gaps in understanding how to comprehend the state of te reo Māori. In addition, because both models (i.e. the UNESCO nine-factor model and He Pā Tūwatawata) prioritise intergenerational transmission, it would be helpful to consider the need to collect better reo Māori data on this front.

3. The relative importance of the elements of vitality needs to be made clear.

In the UNESCO tool, the authors stipulate that each of the nine factors needs to be given prioritisation so that the relative importance of any factor, when compared to another, is fit for any given language. For instance, if the formation of an education system is so unlikely in each context, and not even desirable as an option by the language community, having this as a key factor of vitality makes little sense. If any of the nine factors is particularly important, or particularly unimportant, this should be clarified. This is something that ought to be considered for te reo Māori, from ao Māori perspectives.

He Pā Tūwatawata provides five tūāpapa (levels) that are key elements of language vitality. The structuring of those five levels is important, as it provides a clear flow from the more foundational elements of vitality to the more peripheral ones. The relative importance of the elements of vitality is therefore clear. As such, advancements in the higher levels may be limited if the lower levels are also not advancing, because the lower levels are more foundational to language health. This framework suggests that the development of Level 4 (education and literacy) is ideally pursued when the foundational levels, like intergenerational transmission (Level 3), are strong. In actuality, the relationship between Level 4 and Level 3 is complex.

Enhancing intergenerational transmission could positively impact on education and literacy; and vice versa. For example, educational enhancements could support more intergenerational transmission

in the home. In other words, the inter-relationship between the two levels exists within a complex ecosystem. This contrasts with having an education system devoid of intergenerational transmission in the home. Outlining the relationship between the elements (i.e., tūāpapa) of vitality is a distinct advantage of He Pā Tūwatawata, from ao Māori perspectives.

4. Both quantitative data and qualitative data are useful.

Both qualitative and quantitative data can be used to develop a vitality score using UNESCO's nine-factor model. There is built-in flexibility around using the tool to capture the best and most relevant data available. However, although both quantitative and qualitative data are used, the outcome of the assessment is a numerical score.

In its current form, at the time of writing this paper, He Pā Tūwatawata uses quantitative data exclusively, which is consistent with primary data sources that assess te reo Māori. One way to ease the over-emphasis on quantitative data would be to supplement it with qualitative data, for example by using narratives (Olsen-Reeder, Hutchings, & Higgins, 2017b).

5. Data analysis needs to go beyond description – to include meaningful interpretation of the data.

Of the tools assessed, He Pā Tūwatawata is the only one that offers baseline descriptors of the strength of metrics concerning the revitalisation of te reo Māori (ngā tohu ora, health indicators). As such, the tool is unique and allows for clarity and consistency around how language health is reported – aligned to the different spheres of influence of Māori and the Crown. This is a real strength of the tool in general, but particularly so with regards to the dearth of meaning attributed to te reo Māori metrics (as outlined in the seven studies analysed in Section One of this paper).

The use of generic language vitality tools is strengthened by the vast knowledge and experiences of language revitalisation, and vitality, around the world. However, the same tools are limited in local application and specificity, particularly without Indigenous language perspectives and approaches. This is the added benefit of He Pā Tūwatawata, having been created from ao Māori perspectives.



► Section Two Conclusions and Recommendations

The review of seven studies in Section One of this 'think piece' was intended to be high-level, providing commentary on major insights and resultant considerations. There are nuances to this discussion that are beyond the scope of this paper. Nonetheless, the discussion in Section Two points to two recommended options for health vitality models for te reo Māori. In their current forms, both models meet four of the five key considerations outlined above. For the UNESCO nine-factor model, the reframing of factors (particularly loss of language) is required from kaupapa Māori perspectives. For He Pā Tūwatawata, the inclusion of qualitative data is required.

Overall, the preference is for He Pā Tūwatawata, as it has been developed within the context of Aotearoa New Zealand. This model offers a strong avenue for capturing te reo Māori vitality. In particular, the tūāpapa (levels), spheres of influence, and ngā tohu ora (health indicators) bring local context into the foreground, which is highly desirable in the context of te reo Māori. Therefore, it is the recommended health vitality model for Te Taura Whiri to consider implementing and expanding on – albeit supplemented by the international UNESCO nine-factor model, which provides an excellent platform for assessing language vitality. The UNESCO tool could help to address the limitations of how te reo Māori vitality has been assessed to date. However, it is limited in its non-indigenous view and local applicability.

For Te Whare o te Reo Mauriora, it would be highly advantageous if both the Maihi Karauna and Maihi Māori adopted the same model of language vitality. This would add clarity and coherence to language planning and policy. Te Taura Whiri may see value for the Maihi Karauna in expanding Levels 4 and 5 of He Pā Tūwatawata (i.e. Whakaako and Whakanui respectively), having key responsibilities in these areas. The aim would be to strengthen and tailor the models, so that they could be readily incorporated across Te Whare o te Reo Mauriora, to help determine the vitality of te reo Māori.



Kupu whakamutunga

Conclusion

The purpose of this paper was to create a ‘think piece’ for Te Taura Whiri to consider the use of a health vitality model for te reo Māori – because of the potential benefits for the Maihi Karauna, and Te Whare o te Reo Mauriora more broadly.

Seven studies were reviewed, in response to the first research question about how the health of te reo Māori has been assessed over a 20-year period (1998–2018). In Section One, a brief description of those studies was provided, as well as a summary table and five key insights (which were subsequently re-framed as key considerations in Section Two).

In response to the second research question, about tools that are available to assess the vitality of Māori language in Aotearoa New Zealand; three potential health vitality models were reviewed in Section Two. The review highlighted important contributions that a health vitality model could make to benefit te reo Māori, showing that there are good reasons to adopt two such models (if favourable to Te Taura Whiri). However, the government’s refresh of the Maihi Karauna is a factor that would need to be considered.

From the outset, this paper has emphasised that a health vitality model for te reo Māori must be cognisant of te ao Māori and kaupapa Māori. A health vitality model that is developed without Indigenous contexts and peoples in mind risks losing the connection and leadership essential for language revitalisation and reclamation (Leonard, 2017). Therefore, it is recommended that He Pā Tūwatawata be explored as the preferred model, supplemented by the UNESCO nine-factor model, with alignment to the objectives and goals of the Maihi Karauna.

Te Taura Whiri is well placed to support the adaptation and application of He Pā Tūwatawata, supplemented by the UNESCO nine-factor model, across the Maihi Karauna sphere (and, in partnership with Te Mātāwai, across Te Whare o te Reo Mauriora).

It is worth noting that the point of health vitality models is not to restrict te reo Māori to a score or number on a rubric. The point of a health vitality model is to advance language planning and policy, so





that te reo Māori can become 'he reo mauriora'. In other words, we must not lose sight of the fact that a health vitality model is a tool (Dwyer, 2011). It is not intended to be the only contributor to what determines the state of a language. The real value of the tool is the extent to which it supports effective language planning and policy, which leads to the revitalisation of te reo Māori.

► **Implications for future research on the health of Māori language**

A health vitality model is no panacea for gaps in language policy and language data. However, it could be one part of the broader framework that helps shape the revitalisation of te reo Māori.

Although beyond the scope of this paper, consideration could be given to the need for data and assessment focussed on the process of revitalisation efforts – beyond an assessment of the state of the language itself. For example, it would be ideal if a language vitality model could point to areas of focus for revitalisation. If, for instance, language attitudes are trending well, but the development of education systems is not, then focusing efforts on the latter may be strategically prudent.

Furthermore, because the vitality models can be quite broad, more fine-grained analysis and metrics, utilising kaupapa Māori methodologies, would be useful – and could be considered in future research.

► **Situating the current context**

The refresh of the Maihi Karauna may have consequences for the next phases of work led by Te Taura Whiri, in partnership with the Maihi Māori (Te Mātāwai), across Te Whare o te Reo Mauriora. It is unclear whether the same audacious goals for the Maihi Karauna will remain in place, or whether commitment to these will be resourced to the required effect. This context adds further weight to the recommendation for Te Taura Whiri to adopt He Pā Tūwatawata as the preferred health vitality model, supplemented by the UNESCO nine-factor model, and to refine, adapt or extend measures within the Maihi Karauna sphere of influence.

Further discussion, and consensus, would be beneficial in terms of measures to be used in the Maihi Karauna (in particular, qualitative data). A second phase will stem from this initiative to further support Māori language revitalisation efforts across Te Whare o te Reo Mauriora.



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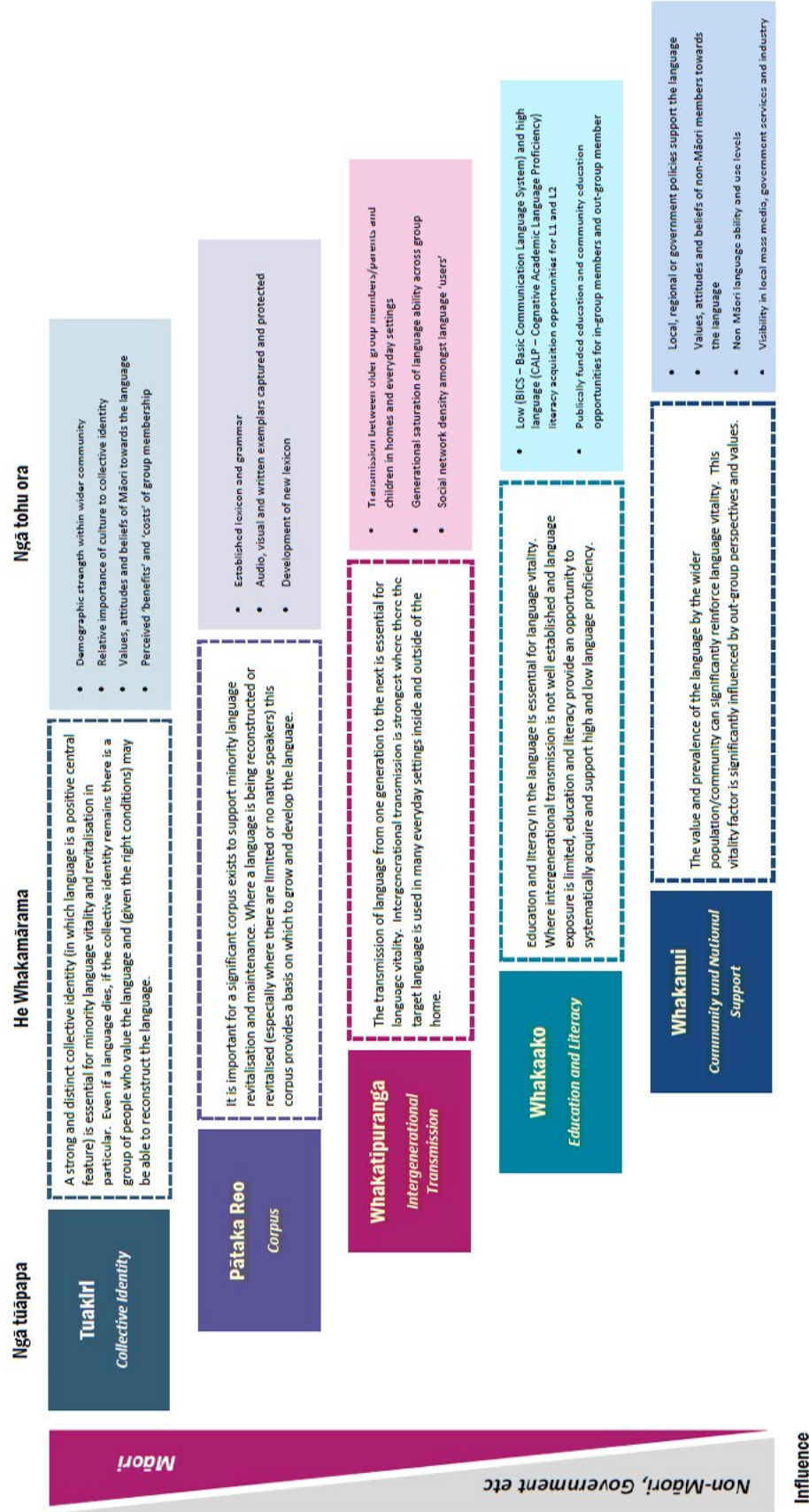


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Appendix A

Te Pā Tūwatawata model of language vitality²²



22. Te Mātāwai. (n.d., p.6).

TE TAURA WHIRI
I TE REO MĀORI

MĀORI LANGUAGE COMMISSION

