



TE MANUNUI

A Toi Tangata Journal

Kai Māori | Kori | Rangahau | Tākaro

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TE MANUNUI



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PŪTAHI MANAWA
HEALTHY HEARTS FOR
AOTEAROA NEW ZEALAND

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NGĀ WHAKAMĀRAMATANGA

TE MANUNUI

“Te Manunui” is represented through the manu at the top of the tohu. As outlined in the explanation of the ingoa, Te Manunui acts as a metaphor for the kaituhi; signalling a figure of authority and movement, one who is able to move with purpose across different domains of knowledge and understanding.

POUTAMA

Also connected to Ngā Kete o te Mātauranga is the poutama pattern. In this context, the poutama represents the journey of the kaituhi, with each step symbolising progression toward deeper understanding, greater insight, and higher levels of educational attainment.



NGĀ KETE O TE MATAURANGA

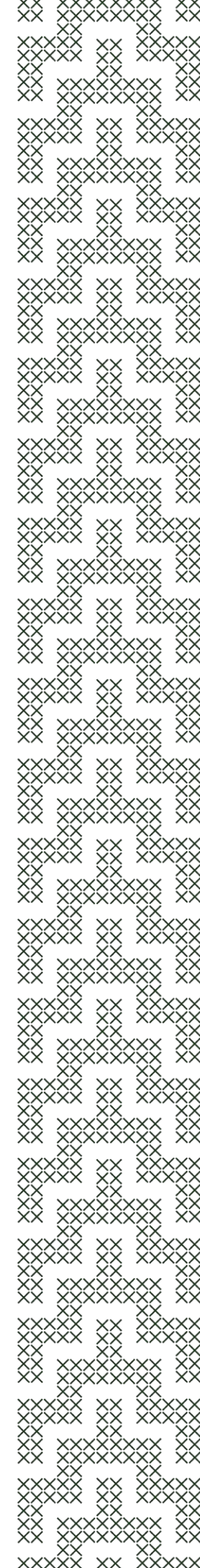
Within the tohu of the manu, it can also be seen as three tapatoru forms. In relation to the kōrero around moving between domains of knowledge and understanding, these represent Ngā Kete o te Mātauranga (the baskets of knowledge) which hold significant importance within mātauranga Māori and further reinforce the kaupapa of learning, wisdom, and the pursuit of knowledge.

TUKUTUKU

The tukutuku represented within this tohu reflects the collective kōrero and whakaaro of the kaituhi. It symbolises the weaving together of many kaupapa, ideas, and perspectives - hei tuitui i ngā kaupapa maha.

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Foreword

There is something powerful about Māori writing in spaces intentionally created for our own voices. Spaces where whakaaro can emerge without compromise, where lived experience is knowing, and where our stories are not translated or moulded to fit external expectations, but can exist fully in their own mana.

The inaugural Toi Tangata Journal; *Te Manunui*, reflects this intention. What has emerged through this kaupapa is more than a collection of articles; it is a reflection of collective courage, generosity, and commitment to our communities. Each kaituhi brings with them their own whakapapa, experiences, and ways of knowing, contributing to a body of work that is grounded in mātauranga Māori, relationality, and care.

Through the writing retreat and workshop spaces facilitated by Toi Tangata over the last year, we have experienced firsthand the importance of providing environments where Māori writers feel supported to explore, challenge, and strengthen their voices. Writing can often feel isolating, particularly within academic contexts that have not always been designed with our people in mind. In bringing together the first edition of *Te Manunui* writing became a process of whakawhanaungatanga, reflection, encouragement, reclamation and shared learning.

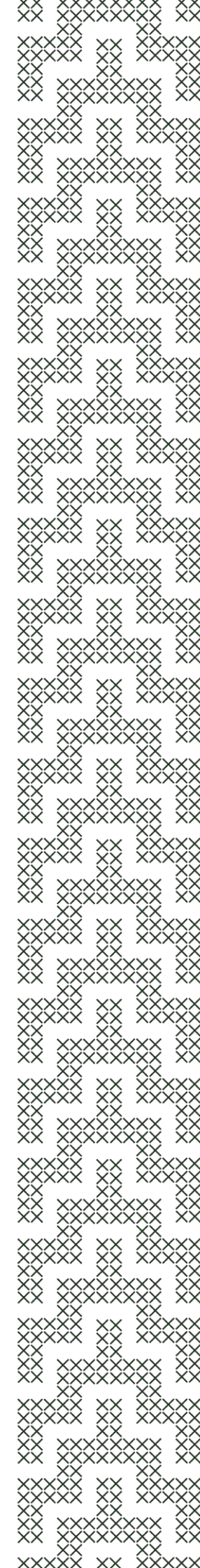
Te Manunui is a celebration of the diversity of Māori thought, expression and experience. The kaupapa of the following articles span whenua, hauora, tākaro, mātauranga, whakapapa, taiao, and Indigenous resurgence. The contributing authors are threaded together by a shared commitment to the wellbeing and flourishing of our people. Together, they remind us that our knowledge systems are not only surviving but they are continuing to evolve, adapt, and that they can thrive when given intentional space to do so.

We acknowledge the vision, leadership, and care that has gone into bringing this journal to life particularly the tireless work of the head editor and rangahau lead Chelsea Cunningham alongside the courage of the kaituhi who have entrusted *Te Manunui* and Toi Tangata with their stories and research. It is our hope that this journal not only uplifts the voices within it, but also encourages others to step forward and recognise the value of their own.

May this journal serve as both a reflection of where we are and an invitation toward what is still to come.

Nā,

Dr Ngahuia Mita & Dr Terina Raureti



Editors Introduction

Ko Te Manunui a Ruakapunga
Te Ūpoko o te Kura Takai puni
I haere i runga rā
I Rangahaua ki tērā taha
I Rangahaua ki tērā taha
I kai takiwā ā nuku
I kai takiwā ā rangi
Ka mataara ake rā
Mourei ē!

Dr Hauiti Hakopa suggested this karakia to me for our inaugural edition of Te Manunui, the Toi Tangata journal. It speaks to a journey of deliberate inquiry, of traversing the seen and unseen realms in the pursuit of knowledge, knowing and understanding. Te Manunui is more than a metaphor for the kaituhi; it signals a figure of authority and movement, one who is able to move with purpose across domains of knowing. In this, the kaituhi is positioned as an active agent, authorised to engage, to traverse, and to bring insight from beyond what is immediately visible.

I haere i runga rā, i rangahaua ki tērā taha indicates movement beyond the familiar, into elevated spaces of thought and perception. The repetition of rangahaua ki tērā taha reinforces exploration; disciplined and persistent inquiry. It is a reflection of commitment to probing, questioning, and extending thinking beyond imposed boundaries. A mode of writing that is intentional, iterative, and unafraid to move into spaces not yet fully known.

I kai takiwā ā nuku, i kai takiwā ā rangi articulates a dual source of knowledge. Here, kai is more than sustenance; it is the act of absorbing and being shaped by both the physical and the spiritual realms. For the kaituhi, this is the integration of lived experience, whakapapa, mātauranga, and academic practice. Knowledge is drawn from multiple domains; formed through the simultaneous engagement with the physical and metaphysical, with what is seen and what is understood beyond sight.

Ka mataara ake rā marks a shift in state; an awakening. Through movement, inquiry, and absorption, there comes a moment of activation, a sharpening of awareness. Writing, in this sense, becomes more than expression; it becomes a process through which clarity is brought into being. This awakening extends from the kaituhi, their kaupapa, and to those who engage with this body of work, positioning the editorial space as one of shared insight.

Mourei ē! stands as a call of emergence and declaration. It signals that something has been brought forth, that the work now stands present and available to be engaged. It is the moment where inquiry takes form, where thought becomes visible, and where the voice of the kaituhi enters into the collective space.

This karakia reflects the very purpose of this journal: a journey of exploration, a weaving of knowledge across realms, and an awakening through the power of our own voices and stories.

Creating Space for our Stories

The conception of the Toi Tangata Journal came from a simple, yet big aspiration: to create a culturally safe platform for Māori writers to share their passions, kaupapa, and lived experiences of hauora Māori. A space where both experienced kaituhi and those new to writing could write with confidence in their own words. This includes the many community champions whose mahi has long served their people, often without recognition within academic spaces, early career researchers, tauira and those more experienced.

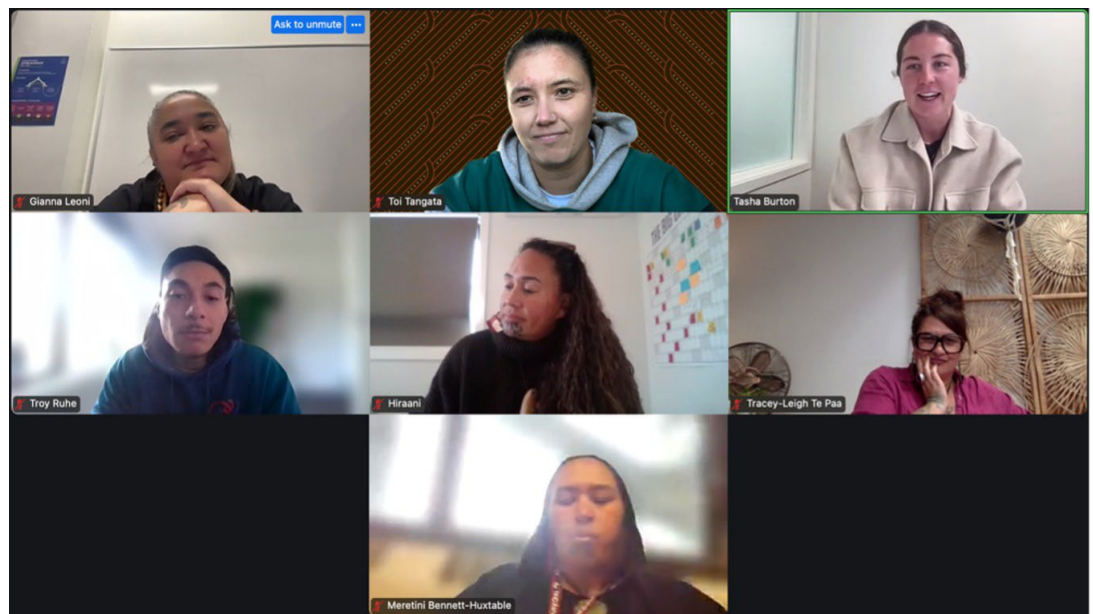
Too often, these very individuals become the subject of research, case studies interpreted and written through the lens of others. While those contributions hold value, there is something profoundly different, and necessary, about creating space for people to become the narrators of their own stories. This journal is grounded in that belief: that our stories are ours to tell, in our own words, in our own ways.

At its heart, this kaupapa is about creating safe spaces for storytelling and then asking: how might we nurture these spaces into pathways for publication?

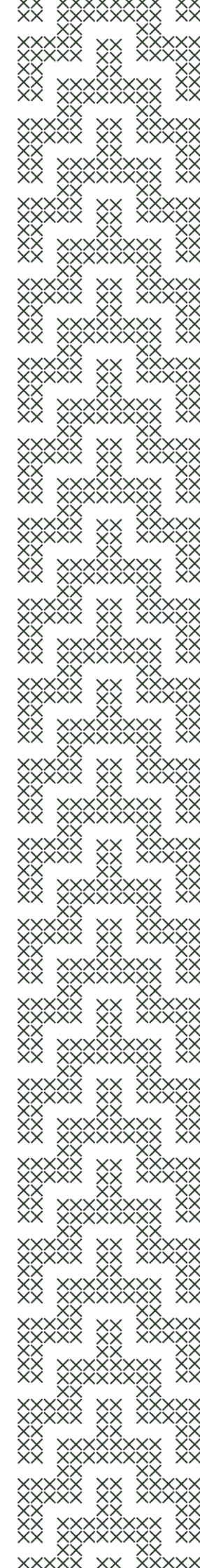
From Kaupapa to Publication

In 2025, we began to explore this question in practice. Starting with a series of online writing workshops in May and June, to build writing capability, to foster whanaungatanga and a sense of collective support. These spaces were intentionally designed to demystify the writing process. Through shared exercises, we explored different structures, styles, and approaches to writing, allowing ideas to emerge and take shape into meaningful bodies of work.

We had contribution from Dr Gianna Leoni, who spoke to the importance of finding your voice in writing. Her kōrero resonated deeply, particularly the balance between honouring your authentic voice while navigating academic conventions. For many, including myself, it was a pivotal moment in the writing journey.



Top (left to right): Dr Gianna Leoni, Chelsea Cunningham, Tasha Burton. **Middle (left to right)** Dr Troy Ruhe, Hiraani Hutana, Tracey- Leigh Te Paa, **Bottom (left to right)** Meretini Bennett-Huxtable



In September, we gathered in Tāmaki Makaurau for a two-day writing retreat, hosted at the Toi Tangata office. This was a dedicated space for writing, intentional time to focus, reflect, and progress individual pieces of work. Alongside this, there were opportunities to ask questions, seek feedback, and work through challenges collectively.

The second day of the retreat centred on peer review, a process that can often feel daunting, yet is essential to the growth of any writer. Dr Ngahuia Mita and Dr Terina Raureti guided and framed the session with care and clarity. Kaituhi were supported to both give and receive feedback in ways that upheld mana and strengthened their work. It was a reminder that writing is not an isolated act, but one that can be nurtured within collective spaces.

This was followed by a practical session on writing abstracts, breaking down what can often feel like a complex task into something accessible and achievable. Within a short writing exercise, each kaituhi left with a solid foundation for their abstract, regardless of where they were in their writing their article.

Ngā mihi nui to our workshop facilitators, our peer reviewers, and our editors, your time and commitment have shaped this journal in ways that words alone cannot capture.

Honouring the Process

We began this journey with twelve kaituhi. For this first issue, we present eight articles.

This is not a measure of loss, nor of failure. Rather, it reflects the reality of writing as a process, one that requires time, patience, and care. To write, particularly within kaupapa that are deeply personal and grounded in whakapapa, is no small task. This is true for experienced writers, and even more so for those stepping into writing spaces for the first time.

As Māori, we descend from generations of storytellers. Our narratives have long lived within oriori, waiata, karakia, and mōteatea. Storytelling is not new to us, it is inherent. What we are navigating now, within journal writing, is a different medium, one shaped by academic conventions and publication processes.

So while not all kaituhi have contributed to this first issue, their journeys are no less significant. The hope remains that, in time, they will return, ready to share their stories when the moment feels right. It will be a privilege to hold space for their mahi in future editions of this journal.



Back row (left to right) Dr Ngahuia Mita, Wiremu Sarich, Meretini Bennett-Huxtable, Dr Troy Ruhe & Kaewa Savage. **Front Row (left to right)** Tash Burton, Dr Deb Heke, Chelsea Cunningham, Hiraani Hutana

He Mihi ki ngā Kaituhi

It is with deep appreciation that we acknowledge the kaituhi who have entrusted us with their work for this inaugural issue.

Moka Apiti

Whenua is a living pedagogical environment, holding within it the genealogies, cosmologies, and narratives of a people. It is from this understanding that Moka's work emerges; repositioning Indigenous GIS not merely as a tool of data sovereignty, but as a medium through which mātauranga can be encountered, enacted, and deepened through structured engagement with place. Moka brings both technical expertise and deep cultural grounding to this kaupapa, and that integration is precisely what this article models. Drawing on kaupapa Māori pedagogies of place, his whenua-based framework argues that spatial systems must be designed around relational encounter rather than abstract representation, aligning pedagogy, governance, infrastructure, and tikanga from the outset. This is a significant and timely contribution to the field.

Meretini Bennett-Huxtable

Te maramataka is a system of knowledge that orients people to the rhythms of the natural world. It is from this foundation that Meretini's research emerged; asking whether mental health crises in the Whanganui region align with the phases of te maramataka Māori. Drawing on seven years of regional data and guided by kaupapa Māori and data sovereignty principles, this work maps crisis patterns against lunar phases, bringing together mātauranga Māori and quantitative analysis in a way that is both innovative and deeply grounded. What emerges is a compelling framework, initiate, communicate, activate, evaluate, that aligns health planning with environmental rhythms. These findings do more than surface patterns; they suggest that Indigenous time systems offer genuine pathways toward preventative, culturally grounded approaches to hauora. It has been a pleasure to witness Meretini's Hui-ā-Tau kōrero from last year find its life as a publication.

Tash Burton

Ki-o-rahi is a taonga, carrying within it the stories, relationships, and values of te ao Māori. It is from this understanding that Tash's Master's research emerges; exploring ki-o-rahi through both qualitative and quantitative approaches. Grounded in kaupapa Māori and shaped by facilitation with taura at the University of Otago and local high schools, this work grows from genuine, lived engagement with the kaupapa. I have had the privilege of knowing Tash since our days at Otago, and to watch her journey, from facilitating ki-o-rahi with rangatahi to now an established sport physiologist and PhD candidate, it has been something special. She is a true embodiment of Tangata Tiriti in action, and this publication is just one mark of many she will leave on this space.

Amy Cameron

Tākaro is resistance, memory, and belonging expressed through the body and whenua. Amy's work calls for the reclamation of place-based tākaro as a living expression of Indigenous resurgence, grounded in whakapapa, collective memory, and connection to place. Amy situates tākaro Māori as a living practice that reconnects us to whenua, pūrākau, tūpuna, and atua, while weaving together Māori epistemologies with global Indigenous perspectives to highlight the interconnected nature of resistance and resurgence. In positioning whenua-centred play as both a site of healing and a form of resistance, this work challenges dominant narratives and offers something rooted in connection, compassion, and collective wellbeing. Her vision of tākaro as a pathway to our Hawaiki Hou is both timely and enduring, a reminder that the answers we seek are often already embedded within our own ways of being.

Dr Deb Heke, Jewelz Petley & Tracey-Leigh Te Paa

Grounded in the wellbeing of kōhine Māori and their whānau, Ōkura Collective intentionally creates spaces for kōhine and their māmā to engage in ritual, learning, and healing. Guided by Ngā Pou Māreikura and the pūkenga of three wāhine Māori, their wānanga centre mātauranga wāhine, atua wāhine, and taiao-based learning, supporting kōhine to understand and embody their inherent mana within contemporary contexts. Through movement, pūrākau, and connection to ancestral narratives, this kaupapa does not simply teach, it restores. This article offers reflective insights into their pilot wānanga, while envisioning the future of this work. It is a reminder that when spaces are intentionally curated for wāhine, kōhine, and whānau, the potential for healing and flourishing is profound. Deb's longstanding connection to Toi Tangata, from a Growing the Puna intern in 2016 to Director of Ngā Wai a Te Tūi Māori and Indigenous Research Centre at Unitec, makes it especially meaningful to see this kaupapa featured within these pages alongside the contributions of Jewelz and Tracey-Leigh.

Dr Hannah Rapata

Hannah offers a deeply reflective contribution drawn from her doctoral journey. Navigating the complexities of being a Māori researcher within Western academic institutions, Hannah speaks to the stretching of both mind and soul that comes with this path. Her article traces the development of her theoretical and methodological positioning, grounded in kaupapa Māori, while also reflecting on the kind of researcher she aspires to be. Central to her work is Te Wharerau, a Kāi Tahu research paradigm developed through her doctoral research. This framework not only anchors her work within localised whakapapa and knowledge systems but offers a meaningful contribution for other Kāi Tahu taura and rangahau grounded in place. Hannah's work is a powerful reminder of the importance of Indigenous frameworks that speak from, and for, our own people.

Dr Troy Ruhe & Mani Malloy-Sharplin

Moeraki, a place shaped by whakapapa, mahinga kai, and the layered histories of the Waitaki rohe. It is from this whenua that Te Pōhā emerges; a kaupapa grounded in conservation and immersion in te ao Māori, guided by pūrākau and knowledge specific to place. Through wānanga co-developed with experts across te reo, astronomy, history, and the environment, Te Pōhā creates space for tauira to connect meaningfully to the taiao. At its heart is the intentional weaving of whakapapa as a living mechanism, not simply as genealogy, but as a way of orienting people to place, to each other, and to practice. This paper, authored by Troy Ruhe and Mani Malloy-Sharplin, both shares this kaupapa and demonstrates how pūrākau, hauora, and practice can be meaningfully brought together.

Kaewa Savage

Kaewa shares a deeply personal and whānau-centred kaupapa through her Master's research. Tiwaiwaka is more than a framework, it is a living expression of reconnection, restoration, and aroha. Her article takes us on a whānau journey, grounded in a memorandum of understanding written by her late Pāpā, alongside the guiding principles of Tiwaiwaka nā Pā Ropata. The presence of her Pāpā and Pā Ropata is felt throughout, their teachings woven into the fabric of this kaupapa and its success. Through wānanga as method, and kotahitanga as practice, Kaewa demonstrates how reconnection to whenua and papakāinga can be realised through collective effort and listening deeply to the needs of the taiao. This is a powerful example of whānau-led approaches to oranga, where healing of the whenua and the people are one and the same.

Kōrero Whakamutunga

This is only the beginning. Our hope is that this journal continues to grow as a living platform for our people, one that nurtures our storytellers, uplifts our voices, and holds space for the many forms our knowledge takes. We are excited for what is to come, for the future issues that will follow, and for the many more kaituhi who will step forward when the time feels right.

Nā,

Chelsea Cunningham

Re-mapping Pedagogy

A Kaupapa Māori Approach to Location-Based Learning in Iwi Landscapes

Moka Apiti*

Abstract

This article reconceptualises spatial technologies through Māori ontological foundations to support Indigenous pedagogies of place. It argues that the divergence between institutional geographic information systems (GIS) and Māori spatial ontology is pedagogical and technical, as spatial systems shape how knowledge is encountered and transmitted.

The article advances the concept of Māori spatial pedagogy as a distinct mode of learning grounded in relational engagement with whenua. Drawing on principles of whakapapa, kōrero tuku iho, and embodied interaction, it identifies key pedagogical conditions in which knowledge is encountered, including movement, co-presence, relational positioning, and the sequencing of narrative. These are contrasted with conventional GIS learning environments that privilege abstraction, visualisation, and analytical distance.

Positioning spatial technologies as pedagogical environments, the article argues that systems supporting Māori relationships with place must be designed around relational encounter rather than abstract representation. This requires an integrated approach aligning pedagogy, governance, infrastructure, and tikanga from the outset.

It concludes by establishing Māori digital spatial technologies as a distinct pedagogical domain, proposing that developing such systems requires both technical capability and fluency in Māori cosmology, whakapapa, and tikanga to inform the design of relational learning environments.

Keywords

Māori spatial ontology; Indigenous GIS; whenua kōrero; whenua-based pedagogy; co-presence; Indigenous data sovereignty

Introduction

Learning within iwi contexts is grounded in whenua, whakapapa, and relational engagement with sites of significance. Knowledge is encountered through movement, co-presence, and participation in lived landscapes. When iwi members are disconnected from these landscapes, the disruption is not only social or cultural but also pedagogical, because it alters the conditions enabling knowledge to be encountered and transmitted.

Digital and spatial technologies have increasingly been used to map, represent, and manage Indigenous knowledge. Within Indigenous geographic information systems (GIS), significant advances have been made in relation to data sovereignty, cultural protection, and spatial representation. Indigenous GIS platforms have largely focused on displaying and managing information through maps, databases, and visualisations, rather than supporting how people learn through engagement with whenua (Apiti, 2018; Harmsworth, 1997).

*Ngāti Hikairo, Ngāti Te Wehi, Ngāti Wairere, Ngāti Porou and Te Whānau a Apanui. Director of Digital Navigators Ltd – Te Ipu Arataki i te Taiao. Doctoral candidate Massey University

Within conventional GIS, engagement is structured through viewing, querying, and editing spatial data. A system oriented towards visualisation positions the learner in front of a screen, whereas a system oriented towards learning and connection takes you to the pā. The question of how spatial systems might function as pedagogical environments grounded in kaupapa Māori remains underdeveloped.

This article addresses that gap by advancing a whenua-based pedagogical model for Māori digital spatial technologies. It argues that spatial systems grounded in Māori ontology must support learning through co-presence, movement, relational engagement, and narrative encounter, rather than through abstract representation alone. Drawing on a research-through-design approach, the article demonstrates how location-based systems can be configured as contemporary extensions of tikanga, enabling mātauranga to be encountered within the conditions its transmission requires. In doing so, it repositions Indigenous GIS as a pedagogical domain and contributes to emerging discussions on Indigenous pedagogy, spatial systems, and digital sovereignty.

Aim and Research Questions

The aim of this research is to design and prototype an iwi-led digital platform that connects authenticated iwi members to wāhi tapu and other culturally significant sites through location-based engagement, QR code verification, and narrative interaction, while supporting iwi communication and membership engagement.

The core research questions are:

1. How can location-based game mechanics be adapted within a kaupapa Māori framework to strengthen iwi relationships with culturally significant sites while upholding tikanga and Indigenous data sovereignty?
2. What governance conditions are required for such a system to operate in alignment with tikanga while supporting iwi membership, communication, and whānau economic engagement?

Kaupapa Māori and Indigenous Pedagogies of Place

Kaupapa Māori and Indigenous pedagogies of place position learning as relational, embodied, and grounded within specific landscapes and genealogical contexts. Within this framework, knowledge is not delivered, it is encountered. Whenua, whakapapa, and community are not the context for learning; they are the conditions in which learning occurs.

If knowledge can be transmitted abstractly, a conventional GIS screen is sufficient. If knowledge must be encountered through whenua, whakapapa, and community, then the system must take the learner somewhere, verify their presence, and situate them within the relational conditions that make knowledge accessible. Learning occurs through movement, observation, participation, and guided interaction with sites of significance, where meaning emerges through relationships between people, place, and narrative. This contrasts with dominant educational models that separate knowledge from context and prioritise cognitive acquisition over lived experience.

In a kaupapa Māori context, whenua is not a backdrop to learning but a primary source of knowledge, where histories, cosmologies, and identities are embedded and encountered through appropriate forms of engagement. A pā site, for example, does not simply mark where events occurred, it holds the genealogical logic of those events in its topography, orientation, and names. That knowledge becomes legible through presence and guidance from those who hold the authority to share it. A map of the same site can show its co-ordinates and boundaries, but it cannot reproduce the conditions that presence creates.

Kaupapa Māori also extends beyond educational philosophy to encompass a framework for knowledge governance. Access to knowledge is structured through whakapapa, tikanga, and collective responsibility. Kaumātua, tohunga, and other knowledge holders govern access to particular forms of knowledge, ensuring that transmission occurs within culturally sanctioned conditions. Learning therefore carries obligation, positioning the learner within relationships and responsibilities that extend across time and place.

When iwi members are displaced from significant landscapes through urbanisation, distance, or the absence of guided return, what is disrupted is more than access to information. The disruption affects the conditions that allow knowledge to be encountered and the continuity of *ahi kā*. Learning within kaupapa Māori requires presence, guidance, and repeated return, where each encounter deepens the learner's relationship with the site and the knowledge it holds. Within this framework, a location-based system that requires physical presence is not simply a design feature but a pedagogical necessity.

These principles are shared across Indigenous pedagogical traditions that position place, embodiment, and relational accountability as central to learning (Battiste, 2013; Brayboy & Maughan, 2009; Smith, 1999). The growing use of digital technologies within Indigenous educational and cultural contexts therefore introduces significant tensions. Platforms built on content-delivery models reproduce precisely the conditions that kaupapa Māori pedagogy challenges: the separation of knowledge from place and the reduction of situated knowledge to portable content.

Location-based systems represent a partial response to this tension by requiring physical presence as a condition of engagement. Whether such systems can support culturally governed access, embodied encounter, and the broader pedagogical conditions described above depends on the values embedded in their design (Carroll et al., 2020; Taiuru, 2025). The question is not whether spatial systems can represent Indigenous knowledge, they already do. The question is whether they can be designed to support the conditions under which that knowledge is transmitted today.

From Representation to Pedagogy in Indigenous GIS

Māori spatial pedagogy operates through a distinct set of learning conditions in which knowledge is encountered through relational engagement with *whenua* rather than transmitted as abstract information. Learning occurs through the alignment of movement, co-presence, and narrative. Movement situates the learner within the spatial field; co-presence establishes engagement with place; and narrative provides the structure by which knowledge is encountered and interpreted. Together, these elements form an integrated system that gives rise to understanding.

Indigenous GIS has developed as critical tools for asserting control over spatial data, protecting culturally sensitive knowledge, and representing Indigenous relationships to land. Significant advances have been made in establishing frameworks for data sovereignty, ensuring that Indigenous communities retain authority over how knowledge is stored, accessed, and used. Within Aotearoa, the use of GIS in Waitangi Tribunal proceedings represented one of the earliest and most consequential applications of this shift, where spatial evidence produced by and for iwi was used to document territorial relationships, resource use, and historical occupation in ways that carried direct legal and political weight. This established a precedent in which Indigenous communities could produce spatial representations on their own terms and for their own purposes.

Kā Huru Manu (n.d), the Ngāi Tahu cultural mapping project, is among the clearest expressions of this development: a platform built to reassert Māori place names, narrative, and territorial knowledge within a spatial system governed entirely by the iwi. Such projects demonstrate that Indigenous GIS has moved beyond the extraction and representation of Indigenous knowledge by external agencies toward systems that are genuinely community controlled (Carroll et al., 2020; Harmsworth, 1997; Kukutai et al., 2023).

Indigenous GIS has always carried cultural and pedagogical intent. Platforms such as Kā Huru Manu, or those developed for Waitangi Tribunal processes, were designed to express cultural knowledge, assert relationships to land, and transmit knowledge to future generations. Delivering that intent, however, is a different problem.

Consider a wharenuī filled with carvings carrying genealogical knowledge and story. The pedagogical intent is clear. But if the only way to encounter that wharenuī is through a photograph on a website, the conditions that make the knowledge transmissible, the presence, guidance, and encounter, have been stripped out by the medium itself.

The knowledge remains, but the relational conditions for encountering it are absent.

What has been missing is a design logic capable of preserving the conditions knowledge requires: presence, relationship, and guided encounter. The field therefore requires a shift from GIS as an instrument of visualisation towards GIS as an environment for structuring learning. This means reconceiving the map as an interface that lets learners move, encounter knowledge, and deepen understanding through guided interaction.

Positioning Indigenous GIS as a pedagogical domain does not abandon the advances made in representation and sovereignty, but extends them by asking that the conditions that allow knowledge to be encountered be designed with the same care as the conditions that allow it to be stored and protected. If spatial systems are understood as pedagogical environments, then decisions about access, interface, and interaction carry pedagogical consequences that must be governed in alignment with tikanga.

Within Aotearoa, Māori Maps (n.d.) provides one example of this broader cultural intent. Designed to reconnect users with marae and the whakapapa relationships those places carry, the platform recognises the problem of disconnection from whenua and positions itself as a gateway toward re-engagement (Apiti, 2018; Harmsworth, 1997). What it cannot provide is the structured sequence of presence, guided encounter, and layered knowledge access that a whenua-based pedagogical model requires.

That limitation is not unique to Māori Maps. The primary function of most GIS, including those developed within Indigenous contexts, remains oriented toward display rather than learning. Users engage with information assembled for viewing rather than encountering knowledge through active participation in place. This representational function remains valuable, but it does not address the pedagogical conditions that kaupapa Māori identifies as essential: movement through landscape, co-presence with sites of significance, relational engagement with knowledge holders, and the progressive deepening of understanding through repeated encounter.

This reflects the intellectual traditions that shaped the development of GIS. Geospatial systems emerged from cartographic and information-management traditions that do not conceptualise the map as a pedagogical environment. Even where Indigenous priorities have reshaped the content and governance of these systems, the underlying design logic has often remained tied to representation rather than learning. Indigenous GIS has yet to fully develop as a field that explicitly theorises how knowledge is encountered through spatial systems and how pedagogical conditions can be structured through design.

The following section articulates a whenua-based pedagogical model that builds on these foundations, defining the principles that enable spatial systems to support Indigenous pedagogies of place. Rather than beginning with the technology, the model begins with learning: movement across landscape, co-presence with sites of significance, engagement with iwi narratives, and the relational accountability that governs what can be known, by whom, and under what conditions.

Toward a Whenua-Based Pedagogical Model

The pedagogical approach outlined in this article can be understood as a whenua-based model of learning structured through the integration of relational positioning, movement, co-presence, and narrative. Within this model, learning is not the acquisition of abstract knowledge but the outcome of situated engagement within a relational field.

Relational positioning establishes the learner's connection to whenua through whakapapa and associated responsibilities. Movement situates the learner within that field, enabling knowledge to be encountered through spatial progression. Co-presence reinforces engagement with place, while narrative provides the structure for interpreting, transmitting, and retaining knowledge. Together, these elements operate as an integrated system from which understanding emerges.

The model therefore redefines spatial learning as a relational and embodied process grounded in Māori ontological understandings of whenua, whakapapa, and engagement. In doing so, it establishes the pedagogical foundation for Māori digital spatial technologies.

A Whenua-Based Pedagogical Model

The whenua-based pedagogical model proposed in this article centres whenua as the primary site of learning and organises the learning encounter around four elements: movement, co-presence, narrative engagement, and reflection. These elements operate interdependently within the learning encounter.

Consider a player who opens the system and sees a pā site marked on the map of their rohe. To unlock its content, they must travel there physically. That journey forms the beginning of the learning encounter itself. Arriving at the site and scanning the QR marker establishes co-presence, and only in that moment of verified presence does the kōrero held by the site become accessible.

The narrative that follows, curated by iwi knowledge holders and tied to that specific place, carries meaning through the whenua in which it is encountered. The reflective questions that follow ask the player to consider the site's meaning, history, and relationships while standing within the landscape to which the story belongs.

Each element activates the next. Without movement there is no co-presence. Without co-presence the narrative becomes detached from place. Without narrative engagement reflection loses its grounding. The model therefore describes a set of interdependent pedagogical conditions that gives rise to spatial learning.

The model operates through iwi authority at every level of the learning encounter. The sites that appear on the map, the kōrero that unlocks at each location, the questions that follow, and the answers that are accepted are designed and curated by iwi knowledge holders who determine what can be shared, with whom, and under what conditions. Sites are nominated by those who hold responsibility for them, while narratives are contributed by kaumātua and knowledge holders who have agreed to their inclusion.

The questions embedded within the system are designed to reflect the ethical and cultural dimensions of each site rather than functioning as generic comprehension exercises. Overseeing this process is a body of kaumātua and knowledge holders whose role is cultural rather than technical. They determine what knowledge enters the system, how it is represented, what visual language and symbology are appropriate, and what knowledge remains protected. The system itself does not determine these conditions; it operationalises the authority and decisions of iwi governance structures (Doherty, 2014; Kukutai et al., 2023).

Movement within the whenua-based pedagogical model is where learning begins. The requirement that learners travel physically to sites of significance reimplements a fundamental condition of Indigenous pedagogy: that knowledge is encountered in place rather than abstracted from it. Movement is purposeful, directed towards sites whose significance is defined by iwi, and structured so that progression through the landscape mirrors progression in understanding.

The learner does not simply visit locations but moves through a pedagogical environment in which each site represents an encounter with a dimension of iwi knowledge, history, or identity. The landscape itself becomes curriculum, where the order, direction, and pace of movement are pedagogically significant.

Co-presence with sites of significance establishes the threshold condition for learning within the model. The requirement for physical presence before knowledge can be accessed reflects tikanga-based principles in which access is contingent on appropriate engagement, and in which the conditions required to encounter [for encountering?] knowledge are as significant as the knowledge itself.

The threshold is tikanga in digital form: you arrive before you receive. This ensures that learning remains grounded in embodied encounter and that the digital system maintains the conditions that have long governed Indigenous knowledge transmission. By making presence a prerequisite for access, the model positions the body in place as the starting point for learning.

The questions within the system are designed to deepen understanding and connection to the site in question. Early in an encounter, a user may be asked to recall names, relationships, or events connected to the kōrero they have just encountered. As engagement deepens, the questions shift from recall towards interpretation, reflection, and connection. Initial recognition gives way to comprehension, and comprehension gives way to obligation and responsibility.

Within kaupapa Māori, learning is never simply about acquiring knowledge. Knowledge carries obligation. When you know something, you become responsible for carrying it correctly, using it appropriately, and passing it on. The questioning sequence is therefore designed to make responsibility visible. By the end of an encounter with a significant site, the player should understand not only the site itself but also their relationship to it (Smith, 1999).

This is not a new pedagogy. It is the formalisation of a logic long present within kaupapa Māori: that learning requires presence, that knowledge carries obligation, and that authority over what is shared belongs to those who hold it. What this article proposes is a design logic capable of making those conditions structurally enforceable within a contemporary spatial system, enabling the pedagogical intent long present within Indigenous GIS to be enacted through infrastructure aligned with it (Smith, 1999).

Enacting Pedagogy Through Location-Based Systems

The system takes familiar location-based mechanics and reconfigures them as a structured learning environment in which the primary rewards are embodied knowledge of place and strengthened connections with iwi life. Logged-in iwi members navigate a map of their rohe, travel physically to designated sites, scan QR codes to verify their presence, and unlock stories, media, and question sets curated by iwi knowledge holders. Membership engagement, iwi communication, and whānau economic participation are integrated into the learning environment through systems governed by iwi entities.

Key Features

1. Map-Based Interface and Indigenous Cartographies.

The primary interface is a custom cartographic view that places Māori place names at the centre of the map, not as a secondary layer beneath English names but as the primary identity of the landscape. The names that appear are those that iwi use: names that carry genealogical, historical, and cosmological meaning, including the specific names of awa, pā, urupā, and wāhi tapu that would not appear on any commercial map. Māori place names often encode the ancestor who resided there, the event that occurred, or the natural feature that defines it. The map itself becomes a pedagogical surface before the player has travelled anywhere or scanned anything.

Beyond place names, the interface makes visible the rohe, showing whose territory the player is in according to iwi and hapū boundaries rather than local government districts or suburb names. For someone who has grown up knowing they are Ngāti Hikairo but has never seen that represented on a map they use every day, this is significant. The landscape is returned to its Indigenous spatial logic.

The system then organises that landscape into thematically grouped trails that give the player a structured pathway through it. Rather than presenting all sites as an undifferentiated collection of pins with no obvious relationship to each other, a player might choose to follow an awa journey, travelling a river and encountering the sites and narratives connected to it from source to sea. They might follow a mōteatea, visiting sites that are sung through that mōteatea. Or a hekenga

that their tūpuna needed to do, to survive. Or for that matter a mahinga kai trail connecting the player to places where food was gathered, to practices of sustainability, seasonal knowledge, and kaitiakitanga.

Each trail is a curriculum in itself. The player is not collecting locations; they are being taken through a particular dimension of iwi knowledge and identity, one site at a time, in an order that makes the connections between them visible.

2. On-Site Verification via QR Codes and Location.

Each participating site of significance is associated with a physical QR marker and a digital geo-reference, requiring players to be physically present at the site to unlock its content. QR codes may be embedded into pou, signage, or other culturally appropriate markers to minimise visual intrusion while enabling robust verification to prevent remote or automated spoofing. The coupling of QR and GPS ensures that learning and engagement remain grounded in embodied encounter. You cannot unlock a site from your couch; you need to be there. This reflects tikanga-based principles where access is contingent on appropriate engagement.

3. Storytelling, Questions, and Reflective Play.

Upon verification, players access a curated bundle of media, such as audio kōrero from kaumātua, images from whānau archives, waiata excerpts, or textual narratives, that frame the site within iwi histories, cosmologies, and contemporary realities. Each story segment is followed by a short sequence of interactive questions, for example multiple choice, ordering timelines, kupu matching, or interpretive prompts, that test recall but also invite relational and ethical reflection about the site and its ongoing significance.

Higher level players are increasingly asked to engage with “why” and “so what” questions and may be prompted to record short, optional reflections that contribute to a growing, moderated corpus of community perspectives. These narratives function as the primary mode of knowledge transmission, situating the learner within whakapapa and historical continuity, rather than presenting information as isolated or decontextualised content.

4. Progression System and Culturally Grounded Ranks.

Progression is articulated through a tiered-rank system that tracks the number, diversity, and depth of sites engaged with, moving players from novice roles towards positions symbolising responsibility and guardianship. While drawing inspiration from level-based structures in mainstream role-playing and location-based games, the rank names and thresholds are co-designed with iwi to respect tikanga and avoid trivialising chiefly titles. In-game badges and titles emphasise kaitiakitanga, such as guardians of the awa or of whenua kōrero, reinforcing the game’s orientation towards service and responsibility (Burnett, 2023).

5. Iwi Engagement, Membership, and Communication.

A core feature of the platform is its function as an iwi-engagement infrastructure. Player profiles double as membership profiles, with clear consent and messaging that the data they provide support iwi planning, representation, and service delivery. Within the game, access to certain features, such as members-only kōrero, special trails, or participatory design votes on new content, can be tied to verified membership status, creating positive incentives for members to keep their details current. Routine touchpoints in the game, for example rank progression or new quest unlocks, prompt members to confirm or update contact details, marae affiliations, or location, helping iwi organisations maintain accurate and current rolls.

The platform also serves as a targeted communication channel for iwi events and activities. Iwi entities can push notifications about hui, wānanga, sports events, cultural festivals, or consultation

processes to members based on their location, which trails they have engaged with, and their expressed interests, rather than issuing one-size-fits-all pānui. Event-specific quests can make attending hui, participating in wānanga, or visiting new pou part of the game's progression, rewarding participation with unique stories, badges, or in-game recognition.

6. Iwi Businesses and Circular Economy.

An integrated business layer connects site engagement and membership data with iwi and whānau enterprises, including food, accommodation, tours, and services located near or thematically linked to specific sites. Business owners maintain profiles within the platform, update offers, and optionally sponsor trails or events, while players encounter these offerings contextually.

For example, after completing a river trail, they may discover nearby iwi-owned cafés, accommodation, or waka experiences. Rewards such as discounts or special experiences can be tied to in-game achievements or ranks, creating a circular economy in which digital play supports local iwi and whānau businesses.

Whenua-Based Pedagogy and the Design of Location-Based Learning Systems

What the preceding sections establish is that each design feature carries a pedagogical justification that precedes its technical specification. The map is structured the way it is because of how kaupapa Māori understands landscape. The QR threshold exists because of how tikanga governs access to knowledge. The questioning sequence is structured according to what learning within iwi contexts requires, including relational and whenua-based forms of inquiry. The technology enacts the pedagogy; it does not define it.

Governance, Ethics, and Data Sovereignty

Content, site selection, and visibility settings are governed by iwi entities, with differentiated layers for public, members-only, and restricted content to ensure that sensitive kōrero and sites are protected. Player data, including location traces, answer histories, progression metrics, and membership details, are treated as taonga, housed within iwi-controlled infrastructures and subject to clear, transparent data governance that prohibits commercial resale or secondary exploitation. Aggregated analytics, such as patterns of engagement by age group, time of day, region of residence, or trail popularity, are made available to iwi decision makers to inform cultural, educational, economic, and engagement strategies, while individual identities remain protected.

This aligns with Indigenous data sovereignty principles that position iwi as the primary decision makers over data lifecycles, access, and use. Governance, within this system, is the pedagogy. The conditions under which knowledge is accessed, shared, and protected are not administrative constraints layered over the learning experience. They are what makes the learning experience possible (Carroll et al., 2020; Hudson et al., 2016; Kukutai et al., 2023; Taiuru, 2025).

Contribution to Theory and Practice

The central contribution of this article is a reframing. Indigenous GIS is not only a tool of sovereignty, a means of asserting control over spatial data and protecting culturally sensitive knowledge. It is a medium of transmission, a domain through which mātauranga can be encountered, enacted, and deepened through structured engagement with whenua. That reframing shifts the question the field asks of its own systems: not only who controls the map, but what the map can be designed to do for the person standing in the landscape it represents.

For Indigenous pedagogy specifically, the whenua-based model demonstrates that digital mediation does not require abstraction from place. Technology can be designed to return the learner to whenua, structuring access to knowledge through appropriate forms of engagement rather than unrestricted consumption and doing so in ways that maintain rather than displace the authority of those who hold it (Black, 2014; Doherty, 2014; Harmsworth, 1997).

The broader implication is for how Indigenous digital systems are conceived. Pedagogy, governance, and infrastructure cannot be designed in sequence, with one layered on top of another. Each shapes what the others can do.

Consider how access to a site of significance is handled within this system. The infrastructure decision is what technology verifies that a player is physically present. The governance decision is who can access the site at all, under what conditions, and what level of membership or progression is required before content unlocks. That decision belongs to the kaumātua and knowledge holders who hold responsibility for the site. The pedagogical decision is what the player encounters when access is granted, in what sequence, and what questions follow.

In a system where these three things are designed separately, the result is a technically functional platform that delivers content to whoever reaches a GPS co-ordinate, governed by terms and conditions written by a developer, with questions generated by a content team. The infrastructure works; the governance is nominal; the pedagogy is generic.

In this system, the three cannot be separated. The governance decision, for example that a particular site is restricted to verified members of a specific hapū who have completed the preceding trail, directly shapes what the infrastructure must do, which in turn shapes what the pedagogical encounter looks like when it occurs. The kaumātua who determines that a particular piece of kōrero can only be shared with someone who has demonstrated a certain level of engagement has made a pedagogical decision and a governance decision simultaneously. The infrastructure enacts both.

Technology designed separately from tikanga carries the assumptions and decision-making structures embedded within its architecture from the outset. A system developed through the integration of pedagogy, governance, infrastructure, and tikanga becomes something fundamentally different: a mechanism by which tikanga shapes both the storage of knowledge and the conditions in which that knowledge is encountered.

Implications for Iwi Engagement and Digital Sovereignty

The implications of this work extend beyond the design of a location-based system. Iwi engagement, within this framework, means reestablishing relationships between iwi members and whenua through structured forms of learning. The model shifts the focus from increasing user activity to deepening relational connections, where returning to a significant site, hearing the kōrero held there, and reflecting on what it asks of you becomes the measure of engagement rather than time spent on a platform.

Learning within this system is woven into iwi life rather than sitting alongside it. Within this model, updating a contact detail, attending a wānanga, and visiting a pā are all expressions of the same relational process through which identity and belonging are affirmed and renewed. Knowledge, identity, and participation are not separate domains to be managed independently. They are dimensions of a single ongoing relationship between an iwi member and their whenua, their whakapapa, and their community.

Digital sovereignty, within this framework, is a condition of learning. Who controls the system, the data, and access to knowledge directly shapes how learning occurs (Kukutai et al., 2023; Mutu, 2020).

Consider two versions of the same system, with the same sites, the same kōrero, and the same questions, but with different sovereignty arrangements. In the first, the system is hosted on a commercial cloud platform, data are stored on servers outside iwi control, and access protocols are determined by a developer's terms of service. A player arrives at a wāhi tapu site and unlocks the kōrero. The content appears. Technically, the learning encounter has occurred, but the data generated by that encounter, where the player went, how long they stayed, what questions they answered, their membership details and location, flow into an infrastructure that iwi do not control. The developer can change the terms. The platform can be sold. The data can be used in ways that were not agreed to. The learning encounter happened, but the conditions surrounding it were governed by a commercial agreement, not by tikanga.

In the second version, the same player arrives at the same site. The same kōrero unlocks, but the data generated by that encounter are housed within iwi-controlled infrastructure, governed by protocols that kaumātua and knowledge holders designed, subject to data governance that prohibits any use beyond what iwi have sanctioned. The kaumātua who contributed the kōrero knows exactly who has heard it, under what conditions, and retains the authority to withdraw it if those conditions change.

In the first version, the learning encounter is real but the sovereignty is nominal. In the second, sovereignty is not a layer added over the top of the system; it is what makes the learning encounter legitimate. By ensuring that iwi retain authority over data lifecycles, access protocols, and content governance, the model aligns technological infrastructure with tikanga, reinforcing that knowledge is relational, protected, and context dependent. Digital sovereignty is the ground upon which the pedagogical design stands. Without it, the conditions that make the learning encounter possible cannot be guaranteed (Carroll et al., 2020; Kukutai et al., 2023).

The approach demonstrated here offers a model for designing technologies that return users to whenua, reinforcing Indigenous knowledge systems in contemporary environments. Digital platforms developed for Indigenous contexts must be conceived as integrated systems in which pedagogy, governance, and infrastructure are designed together from the outset. This integration ensures that technological development serves iwi aspirations. The system creates the conditions that allow Indigenous knowledge to be encountered according to its own relational and cultural terms.

The pedagogical model outlined here establishes the conditions that enable Māori digital spatial technologies to function as environments for learning, not simply tools for representation.

Conclusion

This article set out to examine whether digital systems can support the conditions through which Indigenous knowledge is transmitted. It argues that they can, provided the design begins with pedagogy. By grounding the whenua-based pedagogical model in kaupapa Māori and Indigenous pedagogies of place, and demonstrating how it can be enacted through a location-based spatial system, the article repositions Indigenous GIS as a pedagogical domain capable of supporting structured, place-based learning within iwi contexts. Its contribution lies in reframing spatial systems as environments shaped by the conditions knowledge requires rather than by the capabilities technology provides.

The significance of this reframing lies in what it demands of future design. If spatial systems are understood as pedagogical environments, then design decisions carry consequences for how learning occurs, how knowledge is governed, and how relationships between people and place are mediated. Pedagogy, tikanga, and digital sovereignty must therefore be integrated from the outset, because architecture inevitably embeds assumptions about access, authority, and control.

This has direct implications for Indigenous technology development. When digital systems are designed before governance conditions are established, iwi may retain authority over content while remaining excluded from decisions about infrastructure, access, and data control. The result is often a platform that carries Māori content while operating according to external logics (Carroll et al., 2020).

An alternative approach begins with kaumātua, knowledge holders, and iwi governance structures. Questions of what knowledge can be shared, with whom, under what conditions, and on whose authority become the starting point for design. Infrastructure is then developed in response to tikanga rather than the reverse.

This article defines the pedagogical conditions required to support Māori digital spatial technologies. It demonstrates that spatial learning, when grounded in Māori ontology, operates through engagement with whenua rather than through abstraction or representation. On this

basis, the development of Māori digital spatial technologies requires pedagogical foundations aligned with whakapapa, movement, co-presence, and narrative. These conditions reposition spatial technologies as environments where knowledge is encountered, enacted, and transmitted within relationships to place.

The implications extend beyond system design to the training of future practitioners. Māori digital spatial technologies require technical capability integrated with cultural and relational grounding, including fluency in whakapapa, tikanga, and Indigenous approaches to knowledge governance. In this way, Māori digital spatial technologies emerge not simply as extensions of GIS but as a distinct domain grounded in Māori ontological and pedagogical principles.

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GLOSSARY

Ahi kā	Burning fires
Awa	River
Hapū	Subtribe
Hekenga	Migration
Iwi	Tribe
Kaitiakitanga	Guardianship
Kaumātua	Elder
Kaupapa Māori	Māori customary practice
Kōrero	Talk/speech
Kōrero tuku iho	Oral tradition
Kupu	Word
Mahinga kai	Cultivated garden/area
Mātauranga	Māori knowledge
Mōteatea	Lament
Ngāti Hikairo	Tribal group of the area between Pirongia mountain and Kāwhia Harbour
Ngāi Tahu	Tribal group of much of the South Island
Pā	Fortified village
Pānui	Announcement
Pou	Pillar
Rohe	Boundary
Tikanga	Protocol
Tohunga	Proficient/expert
Urupā	Cemetery
Wāhi tapu	Sacred place
Waiata	Song
Whakapapa	Lineage
Whenua	Land

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Phase Patterning and Prevention

Aligning Mental Health Crisis Patterns with Te Maramataka Māori: An Indigenous Temporal Framework from Aotearoa

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Abstract

This study examines whether mental health crises in the Whanganui region align with phases of Te Maramataka Māori, the Indigenous lunar and environmental calendar. Using 7 years of data from Whanganui regional datasets (2017–2024), including psychiatric admissions and suicide-related events, these crisis patterns were mapped against lunar phases. Guided by kaupapa Māori and data sovereignty principles, the analysis supported a quadrant framework, initiate, communicate, activate, evaluate, which was developed to align health planning with environmental rhythms. Findings indicated elevated crisis rates during the Tamatea, Korekore, and Turu phases, while Rākaunui and Mutuwhenua align with stability. The results suggest that Indigenous time systems may offer anticipatory insights and culturally grounded strategies to support a shift from reactive to preventative care.

Keywords

Maramataka, Māori lunar calendar, Indigenous knowledge, mental health, wellbeing, community-led health, resilience

Introduction

In Aotearoa New Zealand, the mental health system remains largely reactive, prioritising crisis response over prevention. Despite repeated reform efforts, Māori communities experience disproportionately higher rates of suicide, self-harm, and psychological distress than non-Māori. (Ministry of Health, 2024). Services are under strain, demand continues to increase, and system responses remain limited in their ability to anticipate or prevent distress before it reaches crisis point. This raises an urgent question: what other frameworks might support a more preventative and culturally grounded approach to wellbeing?

Indigenous knowledge systems such as Te Maramataka offer one such framework. Te Maramataka is a Māori lunar and environmental calendar grounded in long-term observation of the moon, tides, stars, seasons and other tohu (environmental signs and patterns) within te taiao (Matamua, 2020; Warbrick et al., 2023). Worldwide, models similar to Te Maramataka, such as the Anishinaabe Medicine Wheel (Mashford-Pringle, 2023), the Fonofale in the (Pulotu-Endemann, 2001) Pacific, and Australian First Nations calendars (Calrke, 2009), help communities align with natural rhythms to predict periods of vulnerability and abundance. More than a tool for marking time, it is a relational system that guides activity, rest, reflection, and collective decision making. In this study, Te Maramataka is approached as a living Indigenous temporal framework with practical relevance for mental health planning and prevention.

*Mokai Pātea Iwi Nui Tonu, Atihaunui-ā-paparangi, Ngāti Rangī, Tuwharetoa, Maniapoto, Tainui, Raukawa au ki te Tonga. Rautaki Māori-, Te Oranganui: Waiora Whānau Innovation and Research, Doctoral candidate Auckland University of Technology, Maramataka Practitioner, Ngā Tohu ki Tai-o-Rongo

This article emerges from my work as a practitioner-researcher embedded in Whanganui (a regional city in the west of the North Island of Aotearoa) and Mōkai Pātea (an inland confederation of iwi in the central plateau of the North Island of Aotearoa). I began noticing recurring relationships between maramataka phases and community crisis data patterns in 2018. What began as a small exploratory observation developed into a longer term programme of practitioner research, guided by knowledge holders and whānau in these regions. This practitioner grounding is central to the research, and these observations prompted the question that underpins this article: whether mental health crisis events might also reflect patterns aligned with maramataka rhythms.

Drawing on 7 years of regional data (2017–2024), including psychiatric admissions, self-harm, family harm, and suicide-related events, alongside practitioner observation and community wānanga, the article explores the potential of Indigenous temporal systems to support anticipatory and preventative approaches to care. This article begins by outlining the theoretical foundations of Te Maramataka Māori and Indigenous temporal systems. It then describes the kaupapa Māori methodological approach and mixed-methods design used in the study. The article next introduces the quadrant framework developed through practitioner knowledge and maramataka rangahau (research), then presents the crisis pattern analysis and discusses its implications for preventative mental health practice.

Te Maramataka Māori

Te Maramataka Māori is a Māori lunar environmental calendar that supports the understanding of rhythms within te taiao. It is grounded in generations of observation of the moon, tides, stars, winds, rainfall, seasons, and other ecological tohu. Rather than functioning as a static calendar, Te Maramataka is a living relational system that guides when to act, gather, plant, harvest, reflect, rest, or prepare. In this way, it supports alignment between human activity and the wider environment. An example of this can be seen in the return of the pīpīwharau (shining cuckoo) to Aotearoa, signifying the arrival of spring. This correlates with local knowledge of certain star constellations and the bird's sound patterns, forecasting weather conditions from the bird's journey to help gardeners know what the season might bring, such as how many kūmara we can plant. For those who work with Te Maramataka, it is a relational framework grounded in people, place, environment, and Atua, opening awareness to shifts in energy, productivity, emotion and collective rhythm.

Contemporary scholarship describes Te Maramataka as both a knowledge system and an environmental framework that supports health and wellbeing by attuning activity to ecological cycles (Harris, 2013; Matamua, 2020; Roberts et al., 2006; R. Solomon & Peach, 2021). While there are shared maramataka concepts across Aotearoa, maramataka practice is not uniform. Hapū and iwi adapt maramataka according to local tohu, whakapapa, environment, and lived practice. This means Te Maramataka must always be understood as place based. In the context of this study, the maramataka knowledge drawn on is connected to Whanganui, Rangitīkei, and Ruapehu, and shaped through local practitioner knowledge, whānau observation, and relationships with knowledge holders from Te Awa Tupua and Mōkai Pātea.

Indigenous peoples across the globe have devised intricate calendrical systems that connect social organisation, ecological wisdom, and wellbeing with the cyclical patterns of the environment. Despite regional differences, these systems share a logic; they help communities anticipate vulnerability and abundance, sustain wellbeing, and align with ecological cycles. For example, the Medicine Wheel provides many North American First Nations a relational framework for balance across mental, emotional, spiritual, and physical aspects. Its quadrants serve as flexible guides for life phases, healing, and resilience (Wilson, 2020). Similarly, Fonofale and Te Whare Tapa Whā (a health model from Aotearoa), conceptualise health as a relational system grounded in family, spirituality, culture, and environment (Pulotu-Endemann, 2001). Australian Aboriginal seasonal calendars segment the year into ecological phases that guide mobility, food gathering, and ceremonial activities according to environmental changes (Janca & Bullen, 2003; Moller et al., 2009). These examples demonstrate that Indigenous temporal frameworks are not merely symbolic systems but practical guides for living in balance with the environment. Te Maramataka Māori can be understood within the broader whakapapa of Indigenous temporal systems.

This place-based understanding is central to the article. Te Maramataka as a practical Indigenous temporal system through which patterns of wellbeing and crisis may be interpreted in preparedness and relationally grounded forms of prevention.

Literature Review

A modern benchmark for maramataka revitalisation is Wiremu Tāwhai's (2013) *Living by the Moon: Te Maramataka o Te Whānau-ā-Apanui*, which records iwi-specific knowledge drawn from oral tradition, ecological observation, and daily practice. Tāwhai (2013) emphasised that maramataka is more than a technical calendar; it is a philosophy of living in harmony with te taiao. Building on this foundation, contemporary scholars have expanded understanding of maramataka as both an environmental knowledge system and a framework for wellbeing. Warbrick et al. (2023) described maramataka as "an Indigenous system of attuning with the environment, and its role in modern health and wellbeing," (p. 1), highlighting that it provides more than cultural symbolism; it is a system of ecological attunement with direct health applications.

Research has consistently positioned maramataka as a relational knowledge system grounded in environmental understanding, integrating cosmological, ecological, and empirical observation (Harris, 2013; Hikuroa, 2017; Roberts et al., 2006). Alongside this, scholarship has contributed to the revitalisation of Māori astronomy and timekeeping (Matamua, 2020; Whaanga et al., 2020), while also highlighting the diversity of maramataka practices across iwi and hapū (King et al., 2008; Robertson & Neville, 2008; Ropiha, 2000). More recently, both practitioners and scholars have begun applying maramataka frameworks within contemporary settings such as education, health, and wellbeing promotion (Collins, 2021; K. Solomon, 2021; R. Solomon & Peach, 2021; Warbrick et al., 2023). Together, contemporary application of long-held maramataka knowledge demonstrates the ongoing relevance of maramataka as both a cultural knowledge system and a systems-based framework for resilience and community wellbeing.

This work highlights how Indigenous temporal systems align well with principles found in contemporary systems theory. Complexity research recognises that health and social systems are adaptive, shaped by cyclical patterns, feedback loops, and emergent behaviour (Broughton, 2015; Hikuroa, 2017). In such systems, resilience and prevention of poor health outcomes for Māori (Sheridan et al., 2024) comes from recognising patterns, anticipating shifts, and responding in rhythm (rather than attempting to control isolated variables). Te Maramataka operates in this way, offering an Indigenous systems-based approach to wellbeing, where its cycles signal periods of productivity, consolidation, or vulnerability. Its cyclical phases can be interpreted as feedback mechanisms, when recognised collectively, these signals allow communities to respond proactively, adjust activities, and support wellbeing before distress escalates into crisis (Mark et al., 2017; Pene et al., 2023). By linking Indigenous knowledge with complexity science, maramataka offers a culturally grounded yet globally relevant approach to preventative practice (Mercier, 2018).

Maramataka is also embedded within Māori cosmology. Atua such as Tangaroa, the atua of oceans and waterways, play an important role in this whakapapa of knowledge. Tangaroa's domain encompasses all waters – seas, tides, rainfall, soil moisture, and the water within the human body (Hanara & Jackson, 2019); from this perspective, human physiology and behaviour is understood as interconnected with environmental and lunar rhythms. K. Solomon (2021) similarly described maramataka as a system of relational elements where each lunar phase carries distinct emotional and energetic significance. These phases signal shifts between productivity, vulnerability, reflection, and restoration. Recognising these rhythms enables individuals and communities to anticipate periods of instability and prepare accordingly.

Western scientific research has occasionally examined the relationships between human behaviour and lunar phases, but their findings have often been considered inconclusive. For example, psychiatric reviews concluded that well-designed studies have failed to show convincing lunar effects (Iosif & Ballon, 2005, p. 319), while earlier meta-analyses found lunar variables "accounted

for less than one per cent of the variance in activities usually termed lunacy” (Rotton & Kelly, 1985, p. 300). These studies typically isolated variables and treated time as linear and neutral. Such approaches conflict with Indigenous epistemologies of time and knowledge that emphasise relational and cyclical understandings of temporal change (Smith, 2012, p. 47). Within te ao Māori, maramataka is understood as both empirical and spiritual, integrating observation of ecological patterns (Durie, 2004; Hanara & Jackson, 2019; K. Solomon, 2021; Warbrick et al., 2023). Each lunar phase guides decisions on fishing, planting, harvesting, and social activity (Tāwhai (2013), reflecting the dynamic relationships between people and environment.

Building on this whakapapa of knowledge, the present study explores whether mental health crisis events follow identifiable rhythms within Te Maramataka Māori. Within maramataka practice, different lunar phases are associated with shifts in energy, productivity, and vulnerability. These phases encompass times of vulnerability and uncertainty (such as Whiro and Tamatea), times of active energy and productivity (like Rākaunui and Korekore), and times focused on reflection and restoration (for example, Tangaroa and Mutuwhenua).

While existing scholarship has demonstrated the cultural significance and contemporary relevance of Te Maramataka Māori, relatively little research has explored how maramataka rhythms might be applied analytically to large-scale wellbeing data. In particular, few studies have examined whether patterns of mental health crisis events may align with lunar phases or how maramataka frameworks might support anticipatory approaches to community wellbeing. Addressing this gap requires approaches that bring together practitioner knowledge, Indigenous temporal frameworks, and empirical datasets (eg. Population-level health data such as crisis callouts, hospitalisations and service use).

Following 7 years of practitioner observation, community wānanga, and iterative prototyping, this study developed an applied quadrant framework: initiate, communicate, activate, evaluate. The model, discussed later in the article, applies maramataka rhythms into practical modes of awareness and response grounded in practitioner knowledge.

Methodology

Kaupapa Māori Methodology

This research was grounded in kaupapa Māori theory, which positions mātauranga Māori as legitimate, authoritative, and central to the production of knowledge. Kaupapa Māori is not simply a methodological choice, it is a philosophical approach that is underpinned by tino rangatiratanga, whakapapa, and relational accountability. It affirms Māori ways of knowing, being, and doing, and seeks to privilege Māori worldviews in the framing, interpretation, and application of research.

Within this approach, knowledge is understood as inherently relational, situated within connections between people and place. As such, this research views data not as discrete or decontextualised units, but as expressions of lived experience embedded within whakapapa and collective wellbeing. This framing shapes how questions are asked, how analysis is undertaken, and how findings are understood and shared.

Building on Durie’s (2004) work at the interface between Indigenous and Western knowledge systems, this study brings these approaches together in dialogue while maintaining the primacy of mātauranga Māori. Te Maramataka Māori functions as the central analytical framework, guiding the interpretation of crisis-related datasets through a temporal lens. This is complemented by quantitative methods, which provide additional scale and pattern recognition.

Ethical Framework

This study followed both Māori and institutional ethical approval (AUTC Reference number: 25/296) to protect participants, uphold data sovereignty, and to ensure safe reporting of sensitive information such as suicide and self-harm. All processes were informed by Te Ara Tika (Hudson et al., 2010), Māori data sovereignty principles (Kukutai & Taylor, 2016), and local tikanga governing the use of community knowledge. Māori governance approval and oversight were provided through iwi and community partners, who retain authority over data use, its interpretation, publication and the right to withdraw.

All quantitative data were fully anonymised by data custodians prior to analysis. Personal identifiers were removed and events aggregated to lunar phases rather than individual cases. In line with national suicide-reporting guidelines, no identifiable details, methods of suicide, or small-area data are presented. Data were stored securely on Aotearoa-based encrypted servers accessible only to the research team.

Wānanga and practitioner reflections were collected with informed consent, including clear communication about the limits of confidentiality in group settings. Participants were able to withdraw their contributions prior to analysis, and all excerpts were paraphrased or de-identified to protect privacy. Local tikanga informed processes, such as karakia, whakawhanaungatanga, and structured reflective wānanga were used to maintain emotional and spiritual safety for participants throughout the research process.

Together, these ethical practices ensure that the analysis remains grounded in whakapapa, relational accountability, and collective wellbeing, reflecting the kaupapa as a community-led process.

Data Sources

This study draws on two primary sources of evidence. The first comprises quantitative crisis-event data obtained through regional partnerships, including more than 15,000 anonymised records spanning from 2017 to 2024. Incident types included acute psychiatric admissions, seclusion events, family-harm screenings, suicide deaths, and police callouts.

The second source consisted of qualitative insights generated through practitioner wānanga, prototype testing, and community interpretation of the data. These engagements created space for practitioners and community members to reflect on patterns emerging within the dataset and relate them to lived experience, local context, and maramataka knowledge.

Within mātauranga Māori frameworks, observation extends beyond visual or numerical data to include sensory, environmental, and relational awareness. Attention to shifts in wind, light, and environmental energy is integral to interpreting maramataka phases. Such observations are recognised as relational forms of intelligence within Indigenous knowledge systems (Hanara & Jackson, 2019; Healthy Families Whanganui, Rangitikei, Ruapehu, 2021; Kovach, 2021).

Data Analysis

Quantitative Analysis

Quantitative analysis involved mapping each crisis event to its corresponding lunar phase within Te Maramataka Māori. Events were grouped by phase and frequency counts were calculated across the dataset to identify patterns of incidence across the lunar cycle. Suites of related phases such as Tamatea, Korekore and Tangaroa were also examined to explore whether clusters of incidents occurred across these multiple phases.

Qualitative Analysis

Qualitative analysis drew on practitioner and clinical interpretation, wānanga kōrero, and embodied observation grounded in Whanganui ways of knowing. Community participants and practitioners reflected on how particular maramataka phases were experienced within everyday life. These insights helped contextualise the numerical patterns and provided relational interpretations of emotional, environmental and social rhythms associated with different lunar phases.

Integrative Interpretation

The final stage of analysis integrated qualitative findings through triangulation. Rather than relying solely on inferential statistical modelling, the analysis prioritised pattern recognition across lunar phases, supported by practitioner interpretation and community validation through wānanga. This integrative approach ensured that findings remained meaningful to community practitioners while maintaining analytical transparency.

Quadrant Framework

The quadrant framework used in this study was developed prior to the crisis-pattern analysis, emerging through maramataka rangahau, practitioner observation and the re-remembering of Indigenous temporal knowledge embedded within community practice. Through sustained engagement with lunar phases, environmental tohu, and practitioner reflections, recurring patterns of response became evident. These reflected cyclical modes of initiation, communication, activation, and evaluation within community living.

Grounded in mātauranga Māori, the framework was developed as an interpretive tool to make sense of these patterns. In this study, it is applied as an analytical lens to explore whether patterns within regional crisis data align with rhythms of maramataka.

Initiate (Yellow)

Early phases such as Whiro and Tamatea signal beginnings characterised by uncertainty, preparation, and heightened emotional vulnerability. This is a time for setting intentions, heightened awareness, and gentle planning.

Communicate (Red)

These phases from Huna to Turu, often involve increased interpersonal interaction and heightened emotional expression. Conscious communication, de-escalation, and activating support networks are vital.

Activate (Green)

Around Rākaunui and Korekore, outward energy and momentum are strongest. These phases support coordinated action and collective mahi when grounded in clarity and relational accountability.

Evaluate (Purple)

Toward Tangaroa through Mutuwhenua, energy begins to wane. These phases support reflection, emotional processing, and integration of learning, allowing for closure and strengthening long-term resilience.

Serving as both a research tool and a guide for practice, the model reflects local place-based cyclical understandings of time and resists linear interpretations of wellbeing.

Figure 1 follows an anticlockwise flow, Indigenous timekeeping. This orientation reflects Indigenous temporal understanding of cyclical time and aligns with observed celestial movement across the sky in te taiao, particularly the rising and setting of celestial bodies, which underpin Māori astronomical observation and timekeeping (Whaanga et al., 2020). This orientation: (1) it helps us to adopt an Indigenous way of understanding time, and (2) it follows the natural movement of celestial bodies from east to west, as seen in te taiao. This setup also recognises how the moon moves in relation to the sun, rising later each day and following the same east-to-west pattern. The cycle begins with Whiro, the new moon, which rises with the sun.

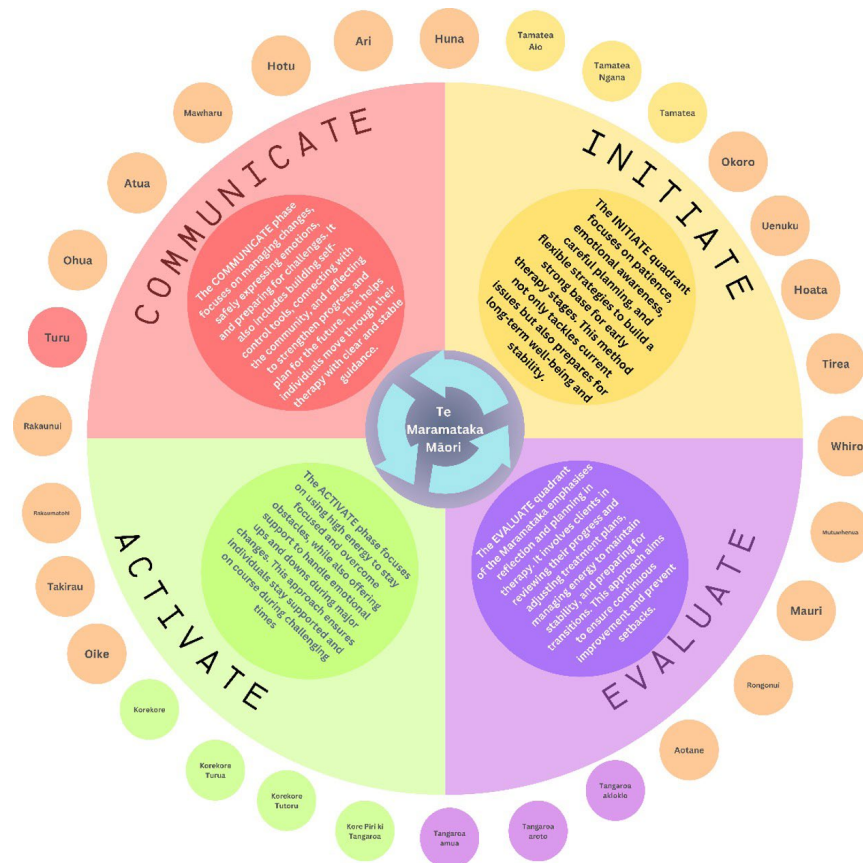
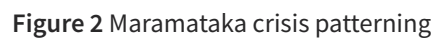


Figure 1 Quadrant framework outline



- Whiro ki Tamatea
- Huna ki Turu
- Rākaunui ki Korekore
- Tangaroa ki Mutuwheua

The figure 2 visualisation indicates elevated levels of crisis-related events during Tamatea and Turu phases, while Rākaunui and Korekore phases generally show lower levels of crisis activity. These patterns suggest that maramataka rhythms may provide anticipatory insight that could support early intervention and community wellbeing planning.

Analysis revealed that crises were unevenly across the lunar phases. Instead, of appearing randomly, incidents tended to cluster within suites of related phases, Tamatea, Korekore, and Tangaroa. These suites often spanned several consecutive nights during which crisis-related events occurred more frequently.

Tamatea phases showed sustained volatility and were associated with heightened emotional intensity. Korekore phases were often linked to increasing pressure and fatigue. Tangaroa phases displayed more variable patterns, sometime associated with turbulence and at other times with periods of clarity. One phase emerged as a distinct anomaly within the dataset. Turu appeared as a singular phase associated with elevated suicide-related events. Unlike the broader suites of phases, which displayed patterns across multiple nights, Turu appeared as an isolated point of disruption within the lunar cycle.

Community interpretations closely reflect these patterns. Whānau often described Tamatea as emotionally intense and unsettling; “It feels like there’s an emotional storm brewing during Tamatea; you’re just on edge waiting for it to pass.” Korekore was described as a time of low energy and emotional fatigue; “During Korekore, it’s like walking through a fog. Everything seems more exhausting, from getting out of bed to dealing with family tensions.” Tangaroa was described as variable, sometimes turbulent and sometimes calming; “A wave of calm after the storm that temporarily smooths out the chaos.”

Takirau also emerged as significant within practitioner interpretation. Whānau and practitioners consistently described it as a phase associated with emotional openness and relational connection: “You can feel the ripple in the air on Takirau nights, prompting us to connect more deeply.” While Turu was identified primarily through quantitative analysis, Takirau was recognised through experiential knowledge, highlighting the value of integrating lived knowledge with statistical patterns.

Practitioners reported adapting programme planning in response to these rhythms. Many avoided scheduling intensive interventions during Tamatea and Korekore, instead prioritising lighter wellbeing activities or check-ins with whānau. Reflective or evaluative activities were often scheduled during calmer phases such as Mutuwhenua or particular Tangaroa moons. These patterns reflect the maramataka knowledge, environmental tahu, and lived experiences of Whanganui, Rangitikei, and Ruapehu regions. As previous research noted, maramataka systems are inherently place-based and vary across iwi and rohe (Hikuroa, 2017; Warbrick et al., 2023).

Discussion

The findings of this study suggest that crisis-related events within this regional dataset follow identifiable rhythms across suites of phases, such as Tamatea, Korekore, and Tangaroa, while certain phases show lower levels of crisis activity. In addition, Turu appeared as a singular phase associated with elevated suicide-related events. These findings support the interpretation that both cyclical suites and singular lunar markers may influence patterns of wellbeing within communities.

Community interpretations of these patterns reinforced the quantitative findings. Whānau and practitioners described Tamatea and Korekore as emotionally turbulent periods, while Tangaroa was associated with clarity following unsettled phases. Turu was frequently characterised as a night that “stands on its own,” reflecting disruption not explained by surrounding phases. These perspectives highlight how lived experience and environmental awareness form part of maramataka interpretation. These findings align with existing scholarship describing maramataka as a relational system linking cosmology, ecology, and wellbeing (Hikuroa, 2017; Warbrick et al., 2023). Rather than functioning as a deterministic calendar, maramataka provides communities with signals that help anticipate shifts in environmental and emotional conditions.

Within this framework, uncertainty is not treated as a failure of prediction but as a broader relational awareness. Recognising patterns while acknowledging uncertainty allows communities to develop forms of “risk literacy” grounded in environmental observation and collective interpretation. Such approaches contrast with biomedical systems that often prioritise linear models of cause and effect.

International research has similarly emphasised the importance of cyclical understandings. Bautista-Valarezo et al. (2020) described Andean health systems as grounded in cycles of balance and disruption. Wilbur and Gone (2023) highlighted Indigenous survivance as continuity punctuated by moments of renewal, while Green and Lynch (2022) and Rimón-Zarfaty and Schweda (2023) critiqued biomedical models of time that overlook cyclical and relational patterns of wellbeing.

Taken together, these findings suggest Indigenous temporal frameworks may support more anticipatory approaches to mental health and community wellbeing. Rather than responding only once crises occur, organisations may benefit from recognising rhythms that signal periods of vulnerability or stability.

Practitioners in this study reported adjusting programme planning in response to maramataka phases. For example, some avoided scheduling intensive interventions during Tamatea and Korekore periods, while prioritising reflective or evaluative activities during calmer phases such as Mutuwhenua. These approaches enabled practitioners to align organisational activities with perceived community rhythms. Practitioners who adapted their planning to these patterns found both suite-based and singular approaches helpful. However, institutional systems often operate according to rigid, linear calendars, tied to fiscal cycles and administrative timelines that make it challenging to accommodate these Indigenous rhythms. As Durie (1998) noted, biomedical models of health frequently frame wellbeing as a progression from illness to cure, overlooking cyclical dimensions of wellbeing. Integrating Indigenous temporal frameworks into service planning therefore requires greater flexibility within institutional structures.

The patterns identified in this study are specific to the Whanganui, Rangitikei, and Ruapehu regions. Maramataka frameworks are inherently place-based and shaped by local environmental conditions, whakapapa, and community knowledge (Hikuroa, 2017; Warbrick et al., 2023). As such, the rhythms observed here should not be assumed to represent other iwi or regions. The governance of such knowledge remains critical when Indigenous data, derived from their contexts, are interpreted and applied (Kukutai & Taylor, 2016). Community-led interpretation, therefore, remains essential to ensuring that maramataka-informed approaches support wellbeing without distorting cultural knowledge.

Conclusion

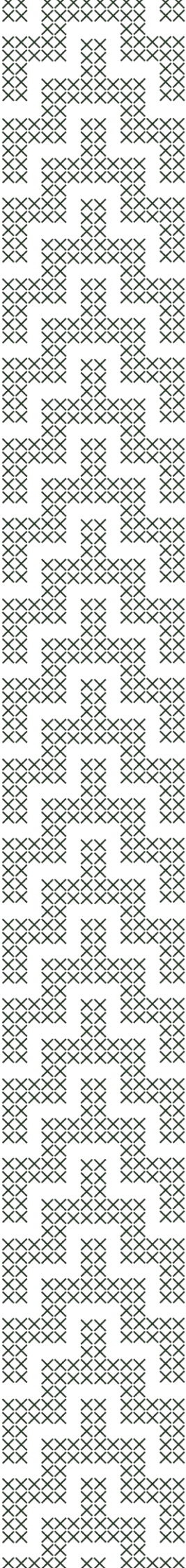
This research began with a simple question: “Can Te Maramataka Māori help us predict and prevent mental health crises?” Drawing on 7 years of listening, observing, and working alongside whānau and practitioners, the findings suggest that it can.

Across the dataset, crisis events were not randomly distributed but tended to cluster within particular maramataka phases. Suites such as Tamatea, Korekore, and Tangaroa were associated with heightened emotional intensity and vulnerability, while phases like Mutuwhenua were generally associated with calmer and more reflective conditions. Turu emerged as a singular phase linked to elevated suicide-related events, while Takirau was recognised through whānau experience as a time of emotional openness and relational connection. Together, these patterns reflect the lived experience of our communities and the wisdom of our environment, embedded within maramataka practice.

Te Maramataka is therefore more than a calendar; it is a relational framework shaped by local *tohu*, whakapapa, and relationships between people and environment. In systems where Māori are often excluded from decision-making, enabling communities to interpret health data and apply their own knowledge shifts responses to wellbeing challenges, making them more timely, culturally grounded, and aligned with community rhythms. At the same time, these insights highlight the importance of Indigenous governance. Without community leadership, attempts to adopt maramataka-informed approaches risk losing the cultural depth that gives them meaning.

Supporting wellbeing in this context requires moving beyond reactive crisis response towards more anticipatory approaches to care. Indigenous temporal frameworks offer one pathway for doing so, helping communities recognise rhythms of vulnerability and stability within their environments. By bringing together *mātauranga Māori*, practitioner knowledge, and empirical data, this study demonstrates how Indigenous knowledge systems can contribute new perspectives to preventative health practice. In a New Zealand health system that remains largely reactive, this shift enables responses toward anticipatory, culturally grounded approaches aligned with community rhythms.

Ultimately, the future of wellbeing may depend not only on new interventions, but on remembering and honouring the rhythms that have long guided relationships between people, place and environment.



Acknowledgements

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GLOSSARY

Atua	Deity
Hapū	Sub-tribe
Huna	10th phase on the Taiuru Maramataka
Iwi	Tribe
Karakia	Prayer, incantation
Kaupapa Māori	Māori approach
Korekore	21st phase on the Taiuru Maramataka (
Maramataka	Māori lunar calendar
Maramataka rangahau	Māori lunar research
Mātauranga Māori	Māori knowledge
Mōkai Pātea	Collective of Iwi in the inland pātea region
Mutuwhenua	Last phase of the Taiuru Maramataka
Pīpīwharauoa	Shining cuckoo
Rākaunui	Full moon
Rohe	Region, boundary
Takirau	19th phase on the Taiuru Maramataka
Tamatea	6th phase of the Taiuru Maramataka
Tangaroa	24th phase of the Taiuru Maramataka
Tangaroa	Deity of the ocean
Te ao Māori	Māori world
Te Awa Tupua	Whanganui River
Te taiao	Natural environment
Te Whare Tapa Whā	Māori health model
Tino rangatiratanga	Self-determination
Tohu	Sign, mark
Turu	16th phase of the Taiuru Maramataka
Wānanga	Learning forum
Whakapapa	Genealogy, lineage
Whakawhanaungatanga	Relationship building
Whānau	Family
Whiro	1st phase of the Taiuru Maramataka

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KĪ o Rahi He Taonga Tuku Iho

Exploring the Realm of Physical Wellbeing in KĪ o Rahi

Tash Burton*

Abstract

KĪ o Rahi, a traditional Māori game, influences physical wellbeing (taha tinana) within the holistic framework of hauora. Drawing on mixed-methods research grounded in kaupapa Māori theory, the study drew on both quantitative and qualitative insights to examine how engagement in KĪ o Rahi influences hauora. The overarching aka mātua of this kaupapa recognises KĪ o Rahi as a taonga tuku iho: a treasured practice handed down by tūpuna Māori that enables the transmission of mātauranga across generations and enhances wellbeing for Māori and all peoples of Aotearoa.

Through the lens of taha tinana, quantitative measures characterised the physiological and movement demands of KĪ o Rahi. The game elicited a high average heart rate (144 ± 16 bpm; 75% of age-predicted maximum) and peak heart rate (178 ± 15 bpm; 94% of age-predicted maximum), with players covering 2.3 ± 0.4 km per session and mean blood lactate levels of 3.2 ± 1.2 mmol/L, demonstrating a substantial cardiovascular, metabolic, and musculoskeletal stimulus. Complementary qualitative data collected via post-game surveys identified three key themes: physicality, kaupapa/purpose and interconnectedness; with participants reporting lower perceived exertion than expected relative to physiological load, reflecting the relational and culturally embedded nature of taonga tākarō. Together, these findings affirm KĪ o Rahi as a culturally grounded pathway to holistic wellbeing in Aotearoa.

Keywords

ngā taonga tākarō; KĪ o Rahi; hauora; taha tinana; physiology

Ko Whakarara te maunga e rū nei taku ngākau
Ko Waianiwaniwa te awa e mahea nei aku māharahara
I tipu ake au ki Kerikeri
E mihi ana ki ngā tohu o nehe, o Kerikeri e tipu nei au
Kei Tauranga Moana ahau e noho ana
Ko Mauao te maunga e tū nei
E mihi kau ana ki ngā mana whenua o tēnei rohe ko Ngai te Rangi, Ngati Ranginui
me Ngati Pukenga
He Pākeha ahau
He tangata Tiriti ahau

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The mihimihi above is who I am and my acknowledgement of the Indigenous people of Aotearoa. Through this mihimihi I describe where I grew up and key places of significance that have shaped my journey. The connections described are foundational to my identity and deeply inform the purpose, motivation, and direction of my life and therefore my research. As such, this mihimihi carries more than a personal story; it is a reflection of the values, relationships, and intentions that guide and shape the direction of this research. I carry with me the understanding that the places I have been shaped by – both the physical environments and the people within them – have profoundly influenced my values and the way I carry myself in the world. Acknowledging who I am and tracing where my waters flow from and to is a way of honouring the people and places that have created open, nurturing spaces for me to engage with and learn within te ao marama (the world of light).

My engagement with Kī o Rahi began in childhood in Kerikeri and was later deepened during my university years, ultimately motivating this research. I first learned the game at age 10 under the guidance of Harko Brown, a key figure in the revitalisation of taonga tākaro in Aotearoa. What began as an enjoyable and distinctive lunchtime activity became a meaningful practice. At university, Kī o Rahi featured prominently through noho marae, learning from tuākana, and later teaching its pūrākau and practices to younger students. These experiences were facilitated through Te Koronga, a graduate research excellence kaupapa at the University of Otago, which provided a supportive space to engage with te ao Māori and mātauranga Māori. Participation in Te Koronga shaped my understanding of te ao Māori and informed the kaupapa and approach of this research, including opportunities to co-lead Kī o Rahi teaching within the Ōtēpoti community.

Despite a growing movement to revitalise Māori games and pastimes, Kī o Rahi and other taonga tākaro remain underpromoted and not readily accessible (Hakiwai et al., 2021; Manuel, 2015). While some opportunities exist for school-age participation, these decline significantly in adulthood. These experiences have motivated my desire to deepen my understanding of te ao Māori and to help expand opportunities for all in Aotearoa to engage with Kī o Rahi. Whilst recognising that my interest in Kī o Rahi ignited this research, it is also imperative to acknowledge that Kī o Rahi is a cultural treasure situated in te ao Māori. Therefore, how I interact with this taonga is important. I have navigated this research through the concept of tāngata Tiriti; which has shaped my positioning and rationale. Tāngata Tiriti refers to non-Māori who came to Aotearoa under the authority of the Crown and are thus considered Treaty partners (Huygens, 2016). Te Tiriti o Waitangi defines the relationship between Māori and the Crown, guaranteeing the protection of Māori culture and the right for Māori to live as Māori (Kawharu, 1989; Kingi, 2006). As tāngata Tiriti, we hold an obligation to uphold Māori rights and actively engage in our own learning around Te Tiriti and colonisation (Huygens, 2016). Bishop (1995) further emphasised the responsibility of non-Māori researchers to develop knowledge that supports both Māori and Pākehā. I position myself as tangata Tiriti within this research, recognising my duty to uphold Article 2 by protecting taonga such as Kī o Rahi, which is central to this research.

Ngā Taonga Tākaro and Kī o Rahi

Ngā taonga tākaro (traditional Māori games) provide an opportunity to be physically active, not only enhancing our taha tinana (physical wellbeing) but all realms of our hauora: taha wairua (spiritual wellbeing), taha hinengaro (mental and emotional wellbeing) and taha whānau (social wellbeing) (Brown, 2010b). The mauri of taonga tākaro embraces a holistic collective of realms, for example, the physical aspects of playing the game; the wairua of game rituals; the influence of atua; and the inter-connectiveness of “performers” (tūpuna, players, spectators, facilitators, teachers) and their environments, their whakapapa, symbolisms and interpreted meanings (Brown, 2010a). Brown (2010a) asserted that taonga tākaro influenced the health and well-being of ancient Māori as no other cultural taonga did. He explained “these pastimes were specifically developed in ancient Māori communities as intellectual and social tools and because of those propositions they are just as functional today and potentially have a wide cross-curricula application in schools” (p. 28). The

pūrākau associated with these taonga are an important element of taonga tākaro; when learning the game it is essential that the pūrākau are also learnt.

Rahi refers to Rahitutakahina, the central character of the pūrākau of Kī o Rahi. Rahitutakahina is strong warrior who embarks on a journey to find his wife, Tiarakurapakewai, after she is kidnapped an enemy iwi. The pūrākau is the basis of the kēmu, Kī o Rahi, played between two teams (Kioma and Taniwha) on a circular field (Figure 1). The game is fast, dynamic, and requires a variety of skills and levels of intensity to play; it is often described as a mixture of rugby, league, tag, touch and netball. A unique aspect of this kēmu is the process of tatū (neogotation). Because the rules of Kī o Rahi differ slightly across different rohe, teams meet on the field to negotiate the rules of play; however, the advantage always lies with tāngata whenua (the hosts or locals of that area).

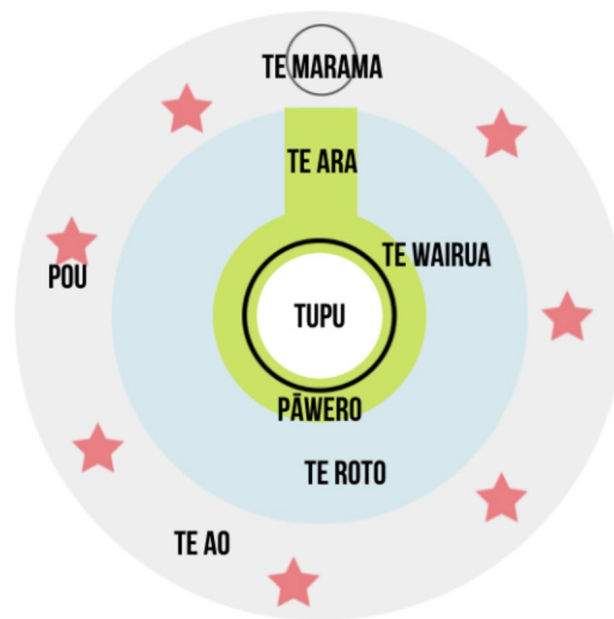


Figure 1. Kī o Rahi field. Typically ~50 m across and can be located indoors and outdoors.

Despite Kī o Rahi being a well-known and widely played game, there is limited academic literature (Campbell et al., 2024; Fabian et al., 2024; Severinsen & Reweti, 2019). Kī o Rahi expert Harko Brown has been instrumental in the revitalisation of ngā taonga tākaro, particularly Kī o Rahi, tracing its history and traditions alongside documenting the rules of play. Palmer et al.'s (2009) research highlighted that Kī o Rahi can encourage Māori to be more active while strengthening connections to Māoritanga. They also noted that pūrākau associated with Māori sport and games can serve as a vehicle for transmitting intergenerational cultural knowledge. Their findings further suggested that Kī o Rahi is an inclusive, user-friendly activity enjoyed by both Māori and non-Māori. Reported benefits included fostering social cohesion and whanaungatanga, empowering Māori students through opportunities to use te reo Māori, and creating pedagogical links between mainstream students and te ao Māori. Harris (2016) examined why Māori in Waitaha participate in Kī o Rahi, showing that the game supports Māori in constructing and maintaining their self-identity, including among those who feel only weakly connected to their Māoritanga. Participation is seen as accessible due to similarities with other sports, its fun and engaging nature, and its role in supporting te reo Māori acquisition and tikanga Māori practices. More recently, Campbell et al. (2024) conceptualised Kī o Rahi as a teaching game for whanaungatanga, a modification of the teaching games for understanding (TGfU) model. Their research demonstrated that Kī o Rahi not only promotes social wellbeing but also helps taurua understand and strengthen their hauora.

Building on this momentum, the present research seeks to contribute to the strengthening, growth, and sustainable development of Kī o Rahi in Aotearoa, recognising its dual value as a taonga and as a meaningful pathway for enhancing hauora through physical activity. While existing studies have richly documented the cultural, social, and educational dimensions of Kī o Rahi, there remains a clear gap in the empirical examination of its physiological and physical wellbeing outcomes. Specifically, little research has quantified the demands and benefits of Kī o Rahi for te taha tinana. This study addresses that gap by contributing to the growing body of Kī o Rahi scholarship through a focused investigation of its cardiovascular, metabolic, and movement demands, thereby providing objective evidence of its value as a culturally grounded form of physical activity that nourishes physical wellbeing.

Methods

Accordingly, this study employs a convergent mixed-methods design, integrating both quantitative and qualitative approaches to explore the multidimensional physiological and movement-based measures to quantify the demands of Kī o Rahi, contributing new evidence on its benefits for te taha tinana within a kaupapa Māori-aligned research framework. Quantitative and qualitative data were collected during the same phase of the study, analysed separately, and then brought together during interpretation to enable triangulation and a more holistic understanding of findings. The research was grounded in kaupapa Māori theory and methodology, ensuring that Māori worldviews, values, and principles guided every stage of the process, from design and data collection to analysis and interpretation. The pūrākau of Kī o Rahi served as a conceptual and analytical lens, framing the research within its cultural, spiritual, and historical context. Quantitative data provided insight into the physical and physiological dimensions of participation, while qualitative methods captured the lived experiences, meanings, and connections participants described through their engagement with Kī o Rahi. Integration of the quantitative and qualitative findings occurred at the interpretation stage, allowing physiological measures to be understood alongside participant narratives and cultural context rather than in isolation. Together, these approaches offered a holistic understanding of how Kī o Rahi operates as both a form of physical activity and a vehicle for cultural expression and wellbeing. A detailed description of the study design, participant recruitment, data-collection procedures, and analytic methods is provided in Burton (2022).

Participants

Thirty-eight participants (21 female, 17 male; mean age 25 ± 7 years) took part in five Kī o Rahi sessions, with physical, physiological, and psychophysical measures collected from 25 participants recruited primarily from the University of Otago and Unipol. The study did not compare Māori and non-Māori perspectives but included both groups, acknowledging the distinct cultural significance of Kī o Rahi and hauora for Māori; quoted data are reported as (sex, age, ethnicity).

Ethics

This research was approved by the University of Otago Human Ethics Committee (Health) (H21/102) and Ngāi Tahu Māori Research Consultation. This research was also guided by tikanga and kaupapa Māori values, as discussed in Burton (2022).

Procedures of Kī o Rahi

Data were collected across five Kī o Rahi sessions, each incorporating whakawhanaungatanga, tatū, game play, qualitative and quantitative data collection, and shared kai. Whakawhanaungatanga established relationships among participants and between participants and the researcher, fostering trust and collective engagement in line with kaupapa Māori principles (Bishop, 1995). The traditional process of tatū was used to negotiate rules of play, ensuring consensus, safety, and cultural alignment (Brown, 2008). Each session comprised four 8-minute quarters with 8–10 players, providing both structured gameplay and an authentic, relational research environment.

A qualitative questionnaire was administered at the end of each Kī o Rahi session, focusing on three areas: hauora, Kī o Rahi and pūrākau, and the revitalisation of Kī o Rahi. Questions were framed using Te Whare Tapa Whā model to explore participants' understandings of taha whānau, taha hinengaro, taha wairua, and taha tinana, and how these domains were influenced through participation. This approach privileged a holistic Māori view of health while also allowing consideration of how Kī o Rahi is understood within both Māori and Western paradigms.

The purpose of these measures was to characterise the physiological and movement demands of Kī o Rahi, enabling comparison with other forms of physical activity known to influence health. Quantitative measures were selected to objectively capture cardiovascular load, movement intensity, and perceived exertion within a community-based, kaupapa Māori-aligned setting.

Table 1 Measurement tools and protocols used

Domain	Measure	Equipment	Outcome variables	Rationale
Physiological	Heart rate	Polar H10 chest band heart rate sensor (Polar, Finland)	Mean HR, peak HR	Internal cardiovascular load
Physiological	Blood lactate	Portable lactate analyser (Lactate Pro 2)	Post-session lactate (mmol·L ⁻¹)	Metabolic intensity
Physical (external load)	Movement demands	STATSports APEX IMU units (Newry, Ireland)	Distance, speed, acceleration/ deceleration	Physical workload and movement profile
Psychophysical	Perceived exertion	Borg RPE scale	Rate of perceived exertion	Subjective effort and experience

Timepoint	Baseline	Pre-Q1	Post-Q1	Pre-Q2	Post-Q2	Pre-Q3	Post-Q3	Pre-Q4	Post-Q4
Heart rate	X								
Blood lactate					X				X
Movement data									
RPE	X		X		X		X		X

Note: RPE = Rating of perceived exertion. Q = quarter (8 min), pre = before a quarter of play, post = after a quarter of play.

Findings

Taha tinana is often described as the physical realm of hauora, encompassing bodily movement and physical wellbeing (Durie, 1985). From a Māori perspective, however, taha tinana extends beyond the literal margins of physical health and is intrinsically connected with taha wairua, hinengaro, and whānau (Karaka, 2015). This section first draws on qualitative insights, followed by quantitative analysis, to explore how Kī o Rahi contributes to taha tinana. The contribution of Kī o Rahi to taha tinana lies not only in its literal physical demands but also in the cultural meaning and layered understandings embedded within the game.

Qualitative Insights

The Physicality

Participants described taha tinana as shaped by the physical world, with exercise, movement, and healthy choices contributing to bodily wellbeing. Importantly, being “comfortable with your physical self” was seen as more meaningful than fitness or statistical measures, reflecting a holistic view of physical health (Durie, 1985; Warbrick et al., 2014).

I think the running and jumping around helps reinforce my taha tinana, gets the heart racing and is all around just a good way to get a sweat in. (Wāhine, 22, Māori)

In Kī o Rahi you need the ability to run, jump, dodge, sprint, throw and dive. All these skills are transferable to a large variety of sports. The range of athletic ability makes it hard but very enjoyable as your body works to its absolute limits. Kī o Rahi positively impacts my taha tinana as my body reacts well to high intensity exercise as endorphins are released uplifting my positive and happy feelings. The game of Kī o Rahi is addictively fun and exciting which makes working out easy. (Wāhine, 22, non-Māori)

Engaging in Kī o Rahi reinforced taha tinana through running, jumping, dodging, and throwing, basic motor skills that are easily transferable from other sports (Harris, 2016). Players highlighted both the physiological benefits, such as elevated heart rate and endorphin release, and the enjoyment of the game, describing it as “addictively fun” and a way to make working out feel easy. This uncoupling of intensity and perceived exertion emphasises how the physicality of Kī o Rahi not only supports taha tinana but also contributes positively to taha hinengaro.

Kaupapa or Purpose

Participants emphasised that taha tinana is enhanced when physical activity has a clear purpose, goal, or intention. Unlike exercise “for the sake of it,” Kī o Rahi was described as meaningful because it is a game, providing motivation through competition, teamwork, and fun. One participant explained that he preferred physical activity with purpose, while another reflected that the “nature of the game pushed me to exercise harder and for longer than I normally would.”

I have always enjoyed being active, it is something that I don't need to force myself to do. In saying that however, I don't enjoy exercising for the sake of it – I would rather exercise for a purpose i.e., a sport, game or social occasion. (Tāne, 23, non-Māori)

For me, playing Kī o Rahi makes physical activity fun, when I play it doesn't feel like a chore and the need for motivation isn't as big as me needing it when I need to get myself to the gym, in a sense relying on myself to go exercises requires a little more motivation than being asked to play a game of Kī o Rahi. (Wāhine, 23, Māori)

This sense of purpose resonates with both Māori perspectives, where physical activity was embedded in cultural obligations and survival (Wilson et al., 2019), and evolutionary arguments that humans are innately driven to move when activity is purposeful or playful (Lieberman, 2015). Participants frequently described Kī o Rahi as enjoyable, with one describing it as physical activity that “doesn't feel like a chore,” and another highlighting that its benefits to taha tinana also uplifted taha hinengaro. Overall, Kī o Rahi sustains taha tinana not only through its physical demands but also by offering purpose, whether cultural, social, or competitive, that makes being active both meaningful and motivating.

The Interconnectedness

Many participants described how engaging in Kī o Rahi uplifted their hauora in ways that extended far beyond physical health. While movement and exertion were central to the experience, participants emphasised that the benefits flowed seamlessly across the interconnected realms of wellbeing: taha tinana, taha hinengaro, taha wairua, and taha whānau. For some, Kī o Rahi served as an outlet for emotional release and mental clarity:

Physical activity for me is one way I relieve stress or to help clear my mind. By playing Kī o Rahi, I was able to just play the game and not worry about anything else that was going on around me, meaning that my taha hinengaro was influenced positively. With the other aspects of hauora being positively influenced by Kī o Rahi also, I was able to enjoy playing Kī o Rahi and my mental state [taha hinengaro] was fulfilled. (Tāne, 22, Māori)

Others spoke about the emotional uplift that came through collective participation, whanaungatanga, and the dynamic energy of the game:

At the start of one of the games I felt quite flat and anxious. However, by the end of the game I felt energetic, happier and content. I think a collection of the physical and social aspects of Kī o Rahi drove this benefit. (Tāne, 36, non-Māori)

Participants reflected on how the unique cultural dimensions of Kī o Rahi, including its pūrākau, spiritual connections, and use of te reo Māori, deepened the experience of wellbeing:

Many facets of the game help to engage the body's mind. I enjoy team sports, exercise, socialising, and developing my physical skill as a player, all of which contribute to my mental well-being. I enjoy the additional aspects within Kī o Rahi that we would not normally experience in traditional sport, like the culture, origin, pūrākau, spiritual connection, and being bi-lingual. Kī o Rahi can teach life lessons and allows me to be active outside of working or studying hours. (Tāne, 24, Māori)

This holistic uplift was often described as a weaving together of physical movement, cultural expression, and social connection:

Hinengaro health is variable, it is different for each of us. Kī o Rahi is definitely one way to improve this dimension of my health, the physical movement and the social interaction are a huge help, and even more so cultural expression through the game is a massive contributor as well. (Wāhine, 22, Māori)

For others, playing in natural environments amplified these benefits, creating a deeper resonance between body, mind, and taiao:

Playing outside makes a huge difference to the experience, physically you feel like you can go harder, as there are fewer limits and mentally is so good to engage with taiao as we play which just makes sense when you listen to the pūrākau. Actually, living out parts of the pūrākau is special and there is real potency in that for enhancing the value of taonga tākaro. (Wāhine, 22, Māori)

Together, these reflections reveal that Kī o Rahi operates as a holistic expression of hauora, intertwining physical exertion with emotional release, social connection, and cultural affirmation. The game becomes not only a site of physical activity but a living practice of balance, identity, and belonging.

Quantitative Insights

The next section presents the physical and physiological profile of Kī o Rahi that quantifies the physiological and movement profile of the game of Kī o Rahi and different positions of Kī o Rahi. The physical and physiological results for the 25 participants are shown in Table 3. Participants consisted of an even mix of females (14) and males (11) of largely homogenous age (mostly 18–25 y) but encompassed a wide variety of prior Kī o Rahi experience. The data are presented in their respective measures: physical, physiological and psychophysical. Inter-individual positional differences are then presented.

Table 3 Overview of the five Kī o Rahi sessions with quantitative participant information

	Sex	Age (y)	HRmax* (bpm)	Previous times playing Kī o Rahi	Game 1	Game 2	Game 3	Game 4	Game 5
Players per team					10	8	8	8	8
A	F	25	195	1–3 times	✓	✓		Player	Player
B	F	23	197	1–3 times		✓			
C	M	24	196	4–9 times	Player	✓	✓	Player	
D	M	35	185	1–3 times		Player		✓, Kaitiaki Q1	✓
(Q2–4)									
E	F	22	198	1–3 times	✓	Player	Player	Player	Player
F	M	23	197	4–9 times				✓, Kaitiaki Q2	Player
G	M	22	198	4–9 times	✓		✓	Player	Player
H	F	26	194	4–9 times		Player	✓	Player	Player
I	F	21	199	Never			✓		
J	F	22	198	4–9 times				✓	
K	F	18	202	1–3 times			Player	✓ (no GPS)	
L	F	22	198	4–9 times				✓, Kaitiaki Q4	
M	M	24	196	4–9 times		✓			
N	M	21	199	4–9 times	✓		Player		
O	F	22	198	Never	✓				
P	M	22	198	1–3 times	✓	✓	Player		Player
Q	M	21	199	10+ times	Player			✓, Kaitiaki Q2, Q4	Player
R	F	22	198	1–3 times			✓		
S	F	22	198	10+ times		Player	✓		
T	M	24	196	4–9 times		✓			
U	M	23	197	1–3 times					✓
V	F	23	197	4–9 times				Player	✓
W	F	25	195	4–9 times	Player	Player	Player	Player	✓
X	M	56	164	1–3 times					✓ (Q1)
Y	F	30	190	Never					✓

Note: *HRmax: age-predicted HRmax, i.e., not directly measured. Player = played Kī o Rahi, no physical data collected. ✓ = played Kī o Rahi, all physical data collected (unless stated otherwise). Q = quarter of game played. Kaitiaki = positional note, refers to player who guarded the tupu.

Physical Measures

Total distance travelled, maximum speed, acceleration and deceleration during Kī o Rahi were measured using GPS. These data characterise the physical demands of the game, which can then be used to interpret the physiological strain.

A wide range of distance was covered during Kī o Rahi, with the maximum distance approximately doubling the minimum distance covered (Table 4). The range of speeds at which the game was played at also varied substantially (Figure 2), with the fastest maximum speed obtained 54% faster than the slowest maximum speed. The distance travelled in a game was not related to the number of times that a participant had played (Figure 3).

Physiological Measures

Heart rate (Table 5) and blood lactate (Table 6) were used as markers of physiological intensity and strain to characterise Kī o Rahi and interpret the potential physical health benefits and cardiovascular risk of engaging in the sport.

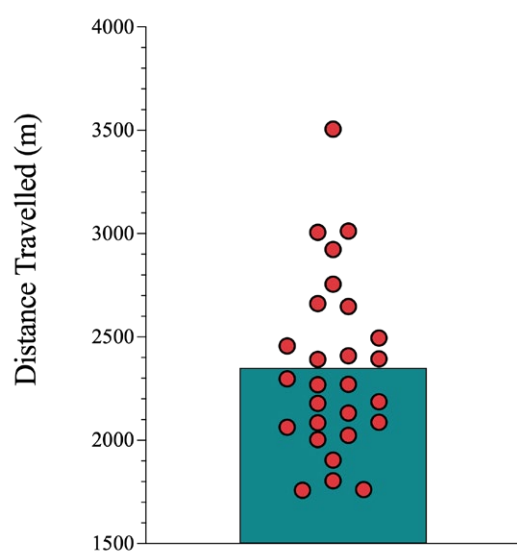


Figure 2 Mean and individual distance travelled during Kī o Rahi

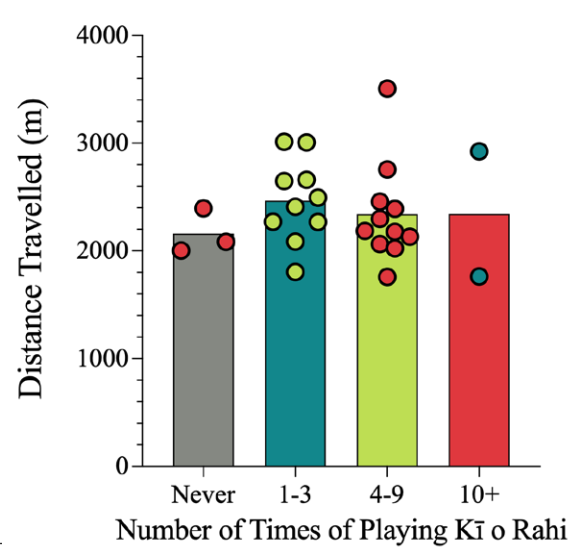


Figure 3 Distance travelled during Kī o Rahi in relation to the number of times participants have previously played

Table 4 Mean, standard deviation, maximum and minimum values for GPS movement data for all participants across five Kī o Rahi sessions

	Mean ± SD	Max	Min
Total distance (m)	2,351 ± 424	3,505	1,758
Maximum speed (m/s)	6.1 ± 0.6	7.7	5.0
Maximum acceleration (m/s2)	4.5 ± 0.5	5.9	3.7
Maximum deceleration (m/s2)	5.5 ± 0.9	7.9	4.0

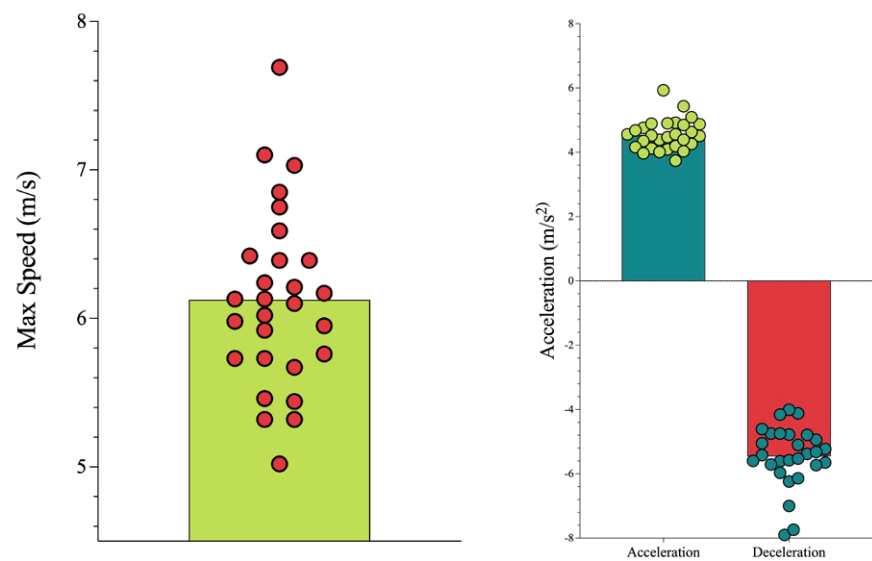


Figure 4. Maximum speed (left panel) and acceleration and deceleration (right panel) during Kī o Rahi.

Table 5 Mean, standard deviation, maximum and minimum heart rate for all participants across the five Kī o Rahi sessions

	Mean ± S.D.	Max	Min
Average heart rate – without rest (bpm)	144 ± 16	164	112
Average heart rate – with rest (bpm)	138 ± 15	158	109
Maximum heart rate (bpm)	178 ± 15	201	144

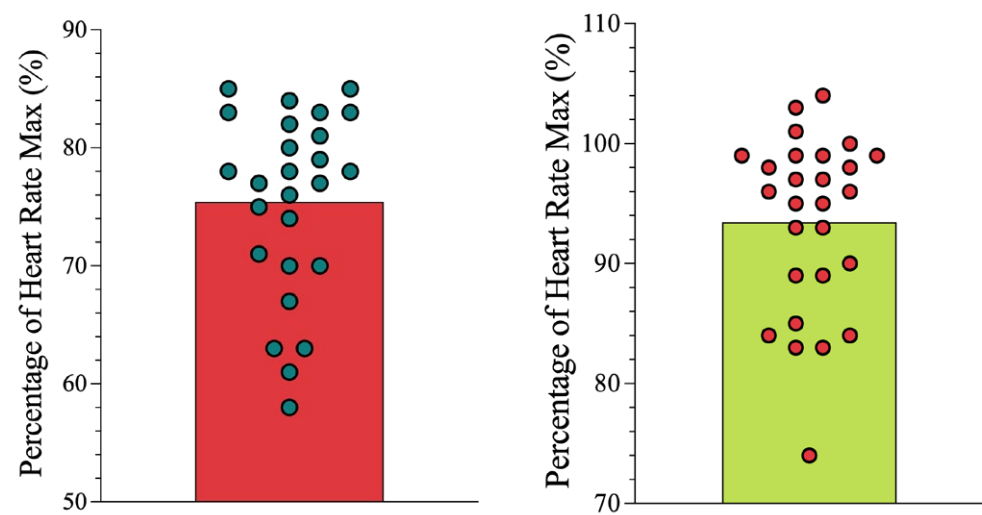


Figure 5. Mean heart rate throughout the game, expressed as a percentage of age-predicted heart rate maximum (left panel). Peak heart rate as a percentage of age-predicted maximum during Kī o Rahi (four 8-minute quarters) (right panel)

Table 6 Mean, standard deviation, maximum and minimum average blood lactate (half and full time) for all participants across the five Kī o Rahi sessions

	Mean ± S.D.	Max	Min
Average blood lactate (mmol/L)	3.2 ± 1.2	6.9	1.2

Note: Average blood lactate is the average of half time and full time blood lactate.

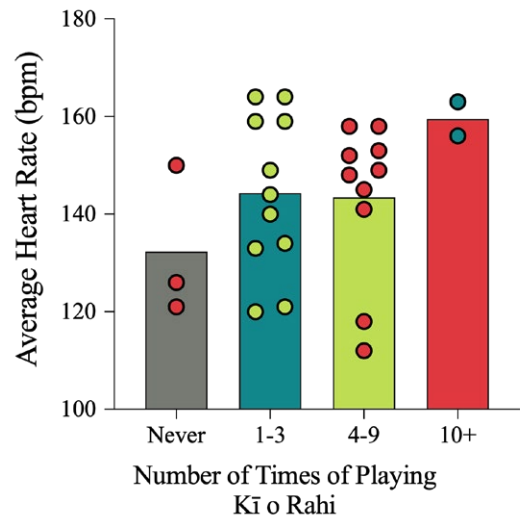


Figure 6 Average heart rate during Kī o Rahi and number of times participants had previously played Kī o Rahi

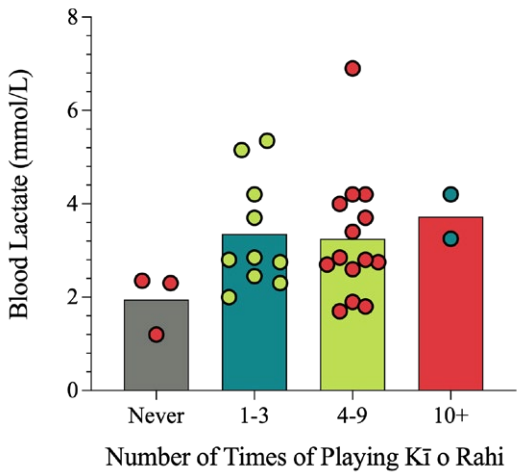


Figure 7 Blood lactate at half time and full time during the Kī o Rahi game

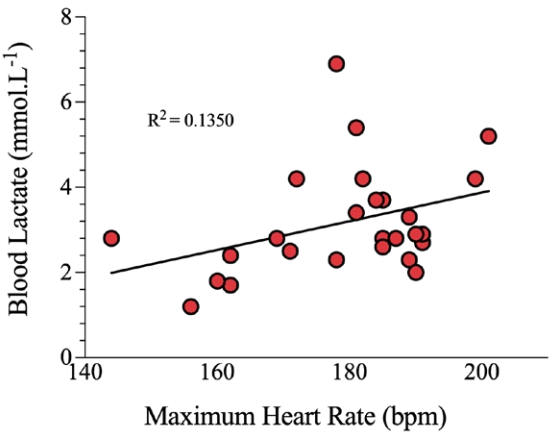


Figure 8 Relationship between blood lactate (average of half and full time) and maximum heart rate

Mean heart rate during the games averaged 75% of participants' age-predicted maximum, while the peak heart rate values averaged 94% of the age-predicted maximum heart rate (Figure 5). It is possible that those with more familiarity with the game had a higher heart rate (Figure 6). Mean blood lactate concentration increased from the typical resting value (1–2 mmol/L) to around what is typically considered as anaerobic threshold (3–4 mmol/L). However, there was no consistent difference between the first or second half of the game (Figure 7). Blood lactate weakly correlated with maximum heart rate observed ($R^2 = 0.1350$) (Figure 8); and possibly related to the number times participants had previously played (Figure 9).

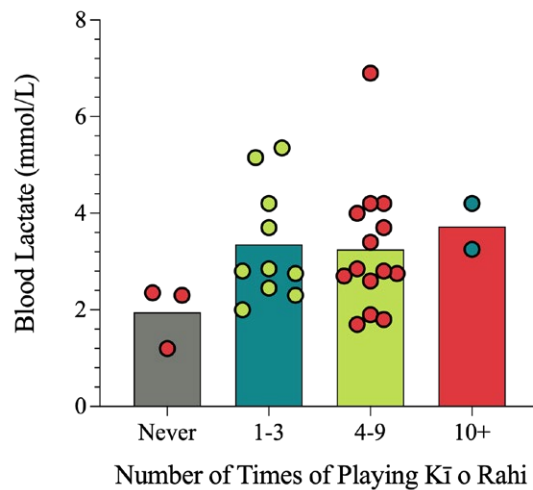


Figure 9 Blood lactate relative to the number of times participants had previously played Kī o Rahi

Psychophysical Measures

Rating of perceived exertion (RPE) using the Borg scale was used to quantify perceived exercise intensity while playing Kī o Rahi. Blood lactate and RPE were positively and moderately related, as would be expected ($R^2 = 0.224$) (Figure 10). Interestingly, maximum heart rate ($R^2 = 0.0306$) showed no relationship with RPE (Figure 11).

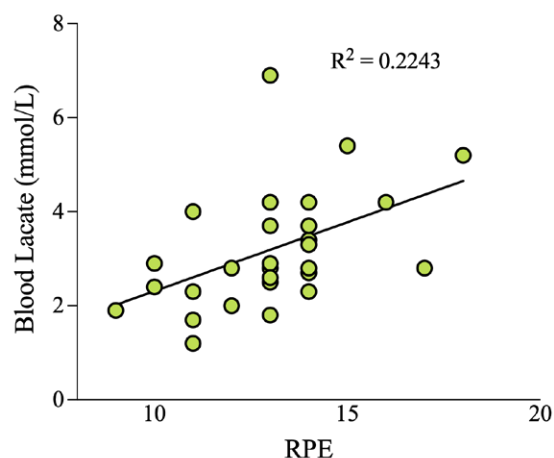


Figure 10 Relationship between blood lactate (average of half and full time) and rating of perceived exertion during Kī o Rahi

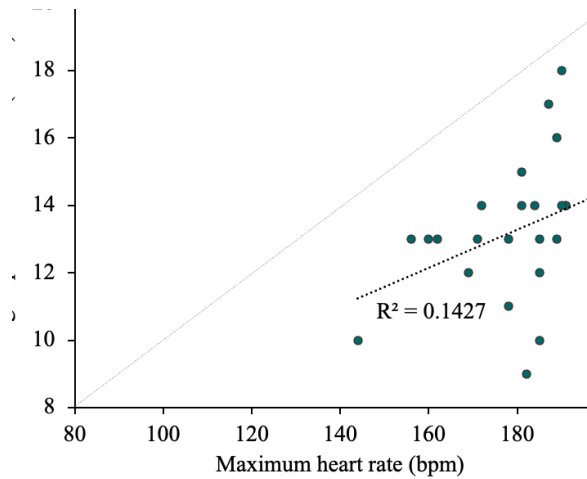


Figure 11 Relationship between rate of perceived exertion and mean (above) and maximum (below) heart rate during Kī o Rahi

Inter-Individual Differences

Differences Between Same Player Across Different Games.

Table 7 displays the relative differences between games for physical and physiological measures from five of the players. Generally, consistency across different games was high (i.e., below 10% difference), except for decelerations and lactate concentrations. Isolated differences, such as the distance travelled by Player G, are likely due to positional aspects of the game (see Table 7).

Differences Between Positional Play.

Table 8 provides information on physical and physiological differences between playing positions during Kī o Rahi, which is also illustrated in the displacement traces (see Player D, Table 8). Clearly, each position requires different motor skills and style of play, and therefore physical and physiological effects. Average heart rate (Figure 12) and distance covered (Figure 13) in a quarter of Kī o Rahi playing as the Taniwha team were slightly greater than when playing as the Kioma team. However, this is specific to what position in Kioma participants played (see Player D – break down of each quarter).

Table 7 Percentage difference of physical and physiological between games for players who were instrumented in at least two games

	Player A	Player C	Player D	Player G	Player P
Previous Kī o Rahi	1–3	4–9	1–3	4–9	1–3
Total distance travelled	5.5%	0.2%	12.8%	29.8%	8.1%
Maximum speed	5.8%	13%	1.6%	3.1%	9.2%
Maximum acceleration	1.8%	8.6%	1.6%	5.0%	12.3%
Maximum deceleration	6.9%	33.3%	6.5%	22.2%	16.3%
Average heart rate	0.5%	1.8%	1.9%		2.1%
Maximum heart rate	1.2%	1.1%	1.5%		1.1%
Fulltime blood lactate	40%	34.8%	38.8%	82.1%	33.3%

Note: Player G has missing HR data for one game. Previous Kī o Rahi = number of times previously playing the game.

Table 8 Participants of Game 4 with positional notes, physical and physiological measures

	Player D	Player F	Player J	Player L	Player Q
Previous Kī o Rahi	1–3	4–9	10+	4–9	10+
Distance travelled (m)	2,495	2,755	1,904	2,456	2,923
Quarter 1	Kaitiaki	Taniwha	Kioma	Taniwha	Taniwha
Quarter 2	Taniwha	Kaitiaki	Taniwha	Kioma	Kaitiaki
Quarter 3	Kioma	Taniwha	Kioma	Kaitiaki	Taniwha
Quarter 4	Taniwha	Kioma	Taniwha	Taniwha	Kaitiaki
Av. heart rate (bpm)	144	152	148	158	163
Max. heart rate (bpm)	185	191	185	191	189
Fulltime blood lactate	3.6	2.7	1.9	2.8	3.4

Note: Previous Kī o Rahi = number of times previously playing the game. Taniwha and Kioma refer to both teams and the positions players take on. In the Taniwha position, players score by throwing the kī (ball) at the tupu. In the Kioma position, players score by touching the pou to complete a try. The Kaitiaki Kioma is a defensive role within the Kioma position, responsible for protecting the tupu from the Taniwha.

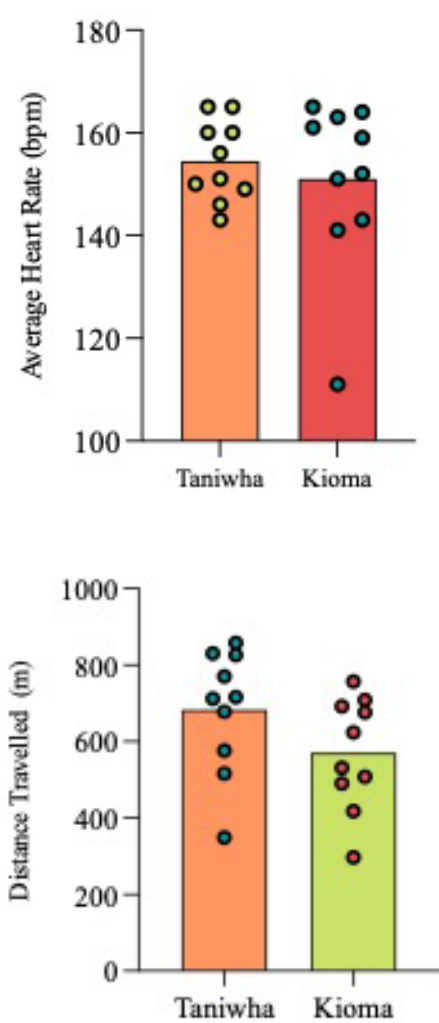


Figure 12 Average heart rate during each quarter for each player during a representative game

Note: Participants play each position twice.

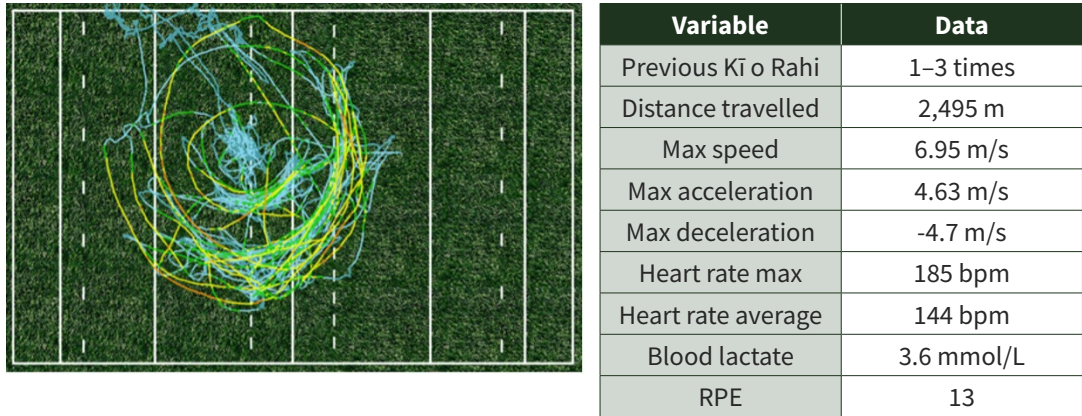
Figure 13 Distance travelled during each quarter for each player during a representative game

Note: Participants play each position twice.

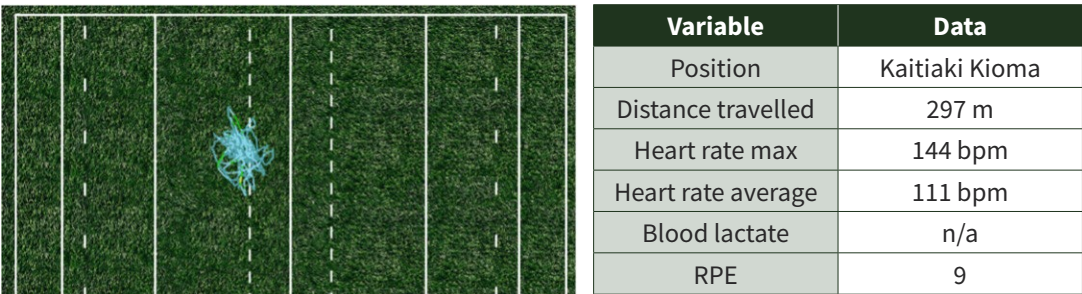
Inter-Individual Positional Differences – Player D

This section highlights the differences in physical, physiological and psychophysical measures between the different positions in Kī o Rahi. Player D has been chosen to further analyse as this participant played a range of positions. During Quarter 1, Player D is guarding the tupu, this position does not require much displacement, which is reflected in the lower heart rate and distance covered. During Quarter 2, Player D is in the Taniwha position, scoring points by throwing the kī (ball) at the tupu and chasing the Kioma team around the field. In this position, Player D plays at a greater intensity, reflected in the increased heart rate, blood lactate, distance covered and RPE. In Quarter 3, Player D is again a Kioma, but is this time playing to touch the pou and then score a try. This Kioma position is played at a greater intensity than when guarding the tupu, again reflected in the greater heart rate and distance covered compared to Quarter 1. Lastly, Quarter 4 shows Player D in the Taniwha position, with similar results to Quarter 2. The images below show the movement map of the full game and the four different positions Player D played.

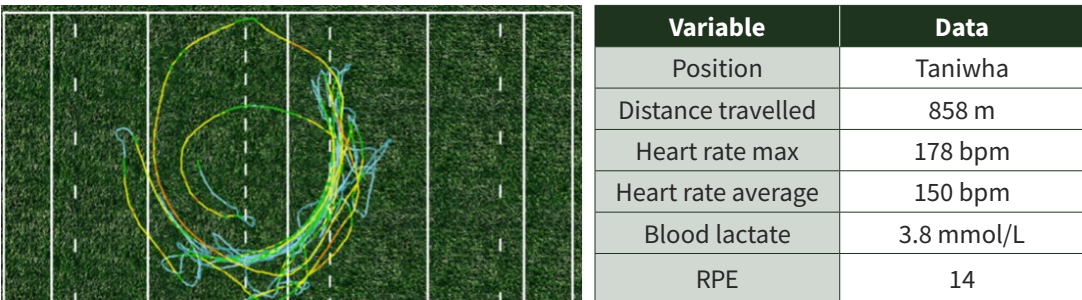
Player D, Game 4, full game

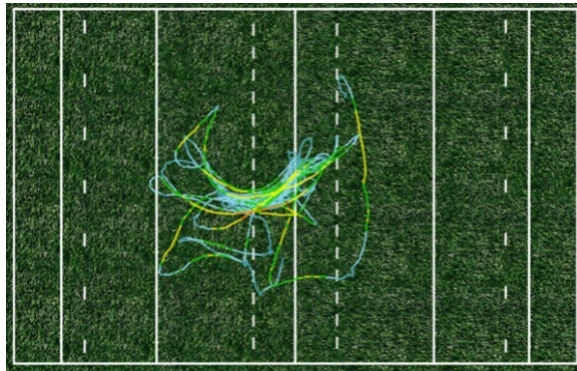


Player D, Game 4, Quarter 1

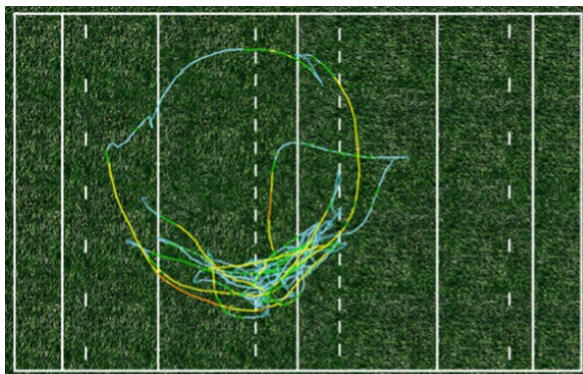


Player D, Game 4, Quarter 2



Player D, Game 4, Quarter 3

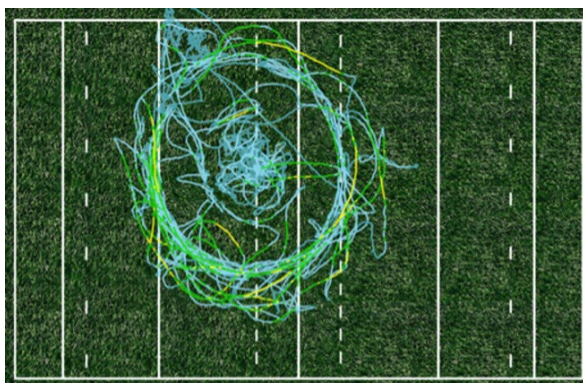
Variable	Data
Position	Kioma
Distance travelled	624 m
Heart rate max	185 bpm
Heart rate average	155 bpm
Blood lactate	n/a
RPE	10

Player D, Game 4, Quarter 4

Variable	Data
Position	Taniwha
Distance travelled	716 m
Heart rate max	181 bpm
Heart rate average	160 bpm
Blood lactate	3.6 mmol/L
RPE	13

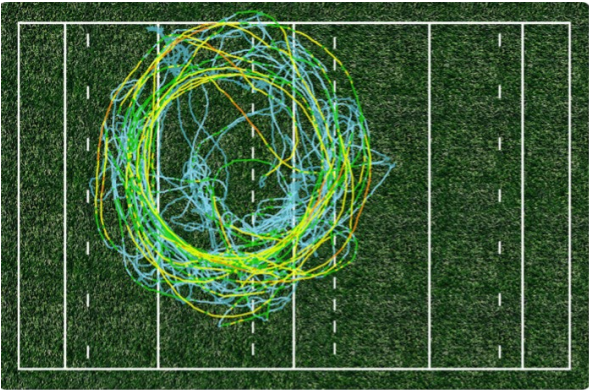
Positional Differences Between Players.

The images and tables below show the movement map of four different players and variables indicating the intensity at which they played the game. These images and tables display the variation between the players; their experience, level of intensity they chose to play the game at and how they play the game.

Player Y, Game 5, full game

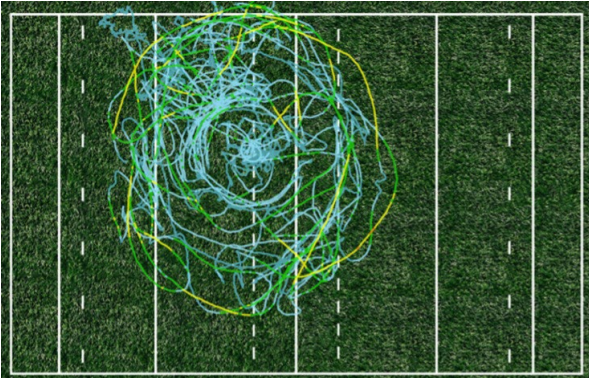
Variable	Data
Previous Kī o Rahi	Never
Distance travelled	2,394 m
Max speed	5.02 m/s
Max acceleration	3.97 m/s
Max deceleration	-4.16 m/s
Heart rate max	156 bpm
Heart rate average	126 bpm
Blood lactate	1.2 mmol/L
RPE	11

Player G, Game 3, full game



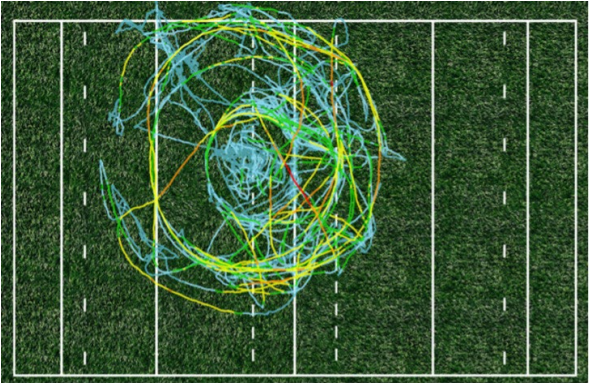
Variable	Data
Previous Kī o Rahi	1–3 times
Distance travelled	2,409 m
Max speed	5.44 m/s
Max acceleration	4.35 m/s
Max deceleration	-4.61m/s
Heart rate max	201 bpm
Heart rate average	159 bpm
Blood lactate	7.7 mmol/L
RPE	18

Player L, Game 4, full game



Variable	Data
Previous Kī o Rahi	4–9 times
Distance travelled	2,456 m
Max speed	5.73 m/s
Max acceleration	4.09 m/s
Max deceleration	-4.09 m/s
Heart rate max	191 bpm
Heart rate average	158 bpm
Blood lactate	2.8 mmol/L
RPE	10

Player Q, Game 4, full game



Variable	Data
Previous Kī o Rahi	10+ times
Distance travelled	2,923 m
Max speed	7.69 m/s
Max acceleration	5.93 m/s
Max deceleration	-5.32 m/s
Heart rate max	189 bpm
Heart rate average	163 bpm
Blood lactate	3.4 mmol/L
RPE	14

KĪ o Rahi as a Taonga for Taha Tinana.

Our quantitative findings demonstrate that KĪ o Rahi is a dynamic, intermittent game that elicits physiological responses known to benefit physical health. Importantly, not all players experience high physiological loads, which highlights the flexibility of the game: it can promote cardiovascular and musculoskeletal benefits without necessarily imposing elevated health risks. To our knowledge, this is the first study to characterise the physical and physiological profile of KĪ o Rahi, providing a basis for understanding its contribution to taha tinana and overall hauora. Building on this, the following discussion considers how the intermittent nature of KĪ o Rahi engages cardiovascular, metabolic, and musculoskeletal systems, and the associated benefits and risks for health.

Cardiovascular Health

KĪ o Rahi elicited substantial cardiovascular responses, with mean heart rates averaging ~75% of age-predicted maximum and peaks reaching 93%. These values are comparable to those reported in small-sided football and basketball, and align with intensities typically achieved during high-intensity interval training (HIIT). Such responses indicate a sufficient cardiovascular stimulus to support adaptations including improved cardiorespiratory fitness, reduced resting heart rate and blood pressure, and enhanced oxygen utilisation, factors known to reduce cardiovascular disease risk. Interestingly, participants reported relatively low RPE, which did not correspond with the high heart rate and lactate responses observed. This suggests that KĪ o Rahi provides a strong physiological stimulus while being experienced as less demanding, likely influenced by its social, cultural, and environmental dimensions. The findings also highlight the game's accessibility, with health benefits evident regardless of fitness or skill level. Players were able to self-regulate intensity while still eliciting positive cardiovascular and metabolic stimuli. From a safety perspective, however, the high peak intensities observed (up to 93% HRmax) may present risks for unscreened or high-risk populations. Positional choices (e.g., playing as Kaitiaki Kioma) and the game's intermittent structure, which incorporates recovery periods, may help mitigate these risks.

Metabolic Health

Blood lactate concentrations during KĪ o Rahi (3.2 ± 1.2 mmol/L) were comparable to, though slightly lower than, values reported in other small-sided games such as football, basketball, and rugby. Variation across players likely reflected positional differences, with some participants performing repeated maximal efforts while others engaged in more stationary roles. These findings demonstrate that KĪ o Rahi places demands across multiple metabolic pathways. High-intensity actions such as accelerations, decelerations, and rapid changes in direction engage the ATP-phosphocreatine and glycolytic systems, while the sustained nature of the game (4 × 8 min quarters) also requires oxidative metabolism for phosphagen resynthesis and glycogen turnover. Together, this indicates that KĪ o Rahi provides a comprehensive metabolic stimulus. Engaging all three energy systems in this way has potential benefits for cardiometabolic health, including improved glucose regulation, enhanced insulin sensitivity, better blood pressure control, and increased mitochondrial content and function. In line with findings from other small-sided games and HIIT studies, KĪ o Rahi therefore appears to support favourable adaptations for metabolic health as part of taha tinana.

Musculoskeletal Health

KĪ o Rahi involves a wide range of dynamic movements, including sprinting, jumping, dodging, throwing, and rapid accelerations and decelerations, that place significant demands on the musculoskeletal system. These activities engage multiple motor units, impose mechanical loading, and stimulate adaptations across muscles, bones, joints, and integrated function. Findings from this study, alongside evidence from other small-sided games such as football, rugby, and volleyball, suggest that participation in KĪ o Rahi may support increases in lean body and leg muscle mass; improvements in muscle strength, balance, reflex response, and agility; as well as gains in bone mineral content and density. The game also requires considerable neuromuscular coordination, including hand-eye coordination, anticipatory tracking of the kī, and spatial awareness to avoid collisions. Such cognitive-motor demands are valuable not only for musculoskeletal function but also for brain health, with potential benefits for learning, memory, neurogenesis, and protection against neurodegenerative decline.

Conclusion

This paper demonstrates how engaging in Kī o Rahi influences hauora when examined through Te Whare Tapa Whā. Participants reported benefits across multiple realms of hauora, affirming that Kī o Rahi is a taonga that nourishes holistic health for Māori and all New Zealanders. Specifically, taha tinana was enhanced through physicality and kaupapa (purpose). In addition to these qualitative insights, this paper presents the first physiological and movement profile of Kī o Rahi. The data show that participation in the game requires the integration of multiple physiological systems, providing benefits for cardiovascular, metabolic, and musculoskeletal health. On average, players sustained heart rates of 75% of age-predicted maximum (144 ± 16 bpm), with peaks of 94% (178 ± 15 bpm). Players covered an average distance of $2,135 \pm 424$ m, and mean blood lactate concentrations were 3.2 ± 1.2 mmol/L. Notably, perceived exertion was generally lower than expected for these physiological responses, suggesting that Kī o Rahi provides a potent yet enjoyable form of physical activity. These findings offer new evidence that Kī o Rahi functions not only as a culturally rich taonga tākaro but also as a health-enhancing activity that supports multiple dimensions of hauora.

The findings of this research affirm Kī o Rahi as a taonga, with significant potential to enhance wellbeing, and contribute meaningfully to the growing body of literature on ngā taonga tākaro. Beyond its role as a physical activity, Kī o Rahi embodies whakapapa, whanaungatanga, and mātauranga Māori, offering a culturally grounded framework for movement, connection, and hauora. My aspiration is that Kī o Rahi is given the space, resources, and recognition it deserves across Aotearoa, not only as a game but also as a vehicle to nourish hauora for all peoples of Aotearoa. Central to this vision is the validation and elevation of Māori ways of knowing and doing, ensuring they are not peripheral but are at the forefront of how we understand and enact wellbeing. This research sought to explore how Indigenous knowledge systems can both inform and expand the discipline of exercise science in Aotearoa and, in doing so, challenge its historically Western-dominated paradigms. By centralising Māori worldviews, this study highlights the transformative potential of Indigenous frameworks to reimagine how we understand movement, health, and collective flourishing.

Wero

As I conclude this kaupapa, I offer a wero, a challenge to all who walk alongside Māori, especially tauiwi researchers, practitioners, and institutions. The challenge is not only to acknowledge the value of Indigenous knowledge systems but also to actively create space for them to lead. This means stepping back when needed, listening deeply, and recognising that Māori ways of knowing, being, and doing are not “alternatives” to Western science; they are systems of knowledge in their own right, with depth, rigour, and relational accountability.

For those in research, the wero is to move beyond inclusion and towards transformation, to question whose knowledge is centred, whose voices are amplified, and who benefits. Research in Aotearoa is encouraged to move toward a more inclusive framework that values both Māori and Western paradigms.

For communities, schools, and policymakers, the wero is to uplift and resource Kī o Rahi, not simply as a sport or cultural artefact, but as a living expression of hauora, whakapapa, and unity; and to provide the fields, the funding, and the visibility so that all people of Aotearoa can experience the mauri and connection that this taonga brings. In doing so, we collectively contribute to a future where Indigenous knowledge is not peripheral but central to our collective wellbeing, and where Kī o Rahi continues to flourish, not just as a game, but as a movement of identity, healing, and hope.

Kia mau ki ngā taonga tākaro, kia heke iho rā i ngā tūpuna, katahi ka tika.

Cherish the games of our ancestors and continue to utilise them for the
good of our people.

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GLOSSARY

Aotearoa	New Zealand
Hauora	Health/well-being
Hui	Meeting
Kaitiaki	Guard
Kaupapa	Purpose
Kēmu	Game, match
Kī	Ball
Kī o Rahi	Traditional Māori ball game
Kioma	A team/position in Kī o Rahi
Kōrero	Discussion
Māoritanga	Māori culture
Mārama	Understand
Mātauranga Māori	Traditional Māori knowledge
Mauri	Life essence, life force
Mihimihi	Greeting
Ōtepoti	Dunedin
Pākehā	Non-Māori
Pou	Post
Pūrākau	Cultural narrative
Reo	Language
Taha hinengaro	Mental and emotional health
Taha tinana	Physical health
Taha wairua	Spiritual health
Taha whānau	Social health
Taiao	Environment
Tākaro	Game
Tangata/Tāngata	Person/People
Tangata Tiriti	People of the Treaty
Tangata whenua	People of the land
Taniwha	A team/position in Kī o Rahi
Taonga	Treasure
Taonga tākaro	Traditional Māori games
Taonga tuku iho	Cultural aspirations
Tapu	Sacred
Tauira	Student
Te ao Māori	Māori world view
Te ao Pākehā	Western world view

Te reo Māori	Māori language
Tika	Correct, true
Tikanga	Customs, protocols
Tiriti o Waitangi	Treaty of Waitangi
Tuākana	Older, more expert (male/female)
Tūpuna	Ancestors
Wairua	Spirit
Whakapapa	Genealogy
Whakawhanaungatanga	Process of establishing relationships
Whānau	Family
Whanaungatanga	Connection
Whenua	Land

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Tākaro as Resistance

Place-Based Play as Decolonisation Practice

Amy Cameron*

Abstract

This article advocates for the reclamation of place-based tākaro as an expression of resistance, whakapapa, collective memory, and the politics of belonging. It explores how play anchored by whenua reconnects us to pūrākau, hītori, tūpuna, and atua that shape our world. Tākaro Māori is a living practice of whanaungatanga that nourishes hauora, revitalises mātauranga, and disrupts colonial narratives. This article weaves a vision of tākaro as a path to our Hawaiki Hou, situating tākaro within both Māori epistemologies and global Indigenous practice to highlight the interconnectedness of Indigenous resurgence through play. It argues that intentional, whenua-centred play is a powerful act of decolonisation and resistance against divisive ideologies and legislation, offering connection and compassion over competition. In a time when communities seek different ways to resolve conflict, heal, and thrive, place-based tākaro emerges as an old yet enduring solution; one that calls us home to ourselves, our landscapes, and each other. This contribution invites further conversation about the role of tākaro in sustaining Māori futures, grounded firmly in mātauranga ki te whenua.

Keywords

tākaro Māori, play theory, ethical pedagogy, Indigenous praxis, community building, inclusive learning

Introduction: The Play Problem

It's useful to understand from the outset that this article attempts to cover themes that could be inexhaustibly discussed in wānanga and therefore should serve as a conduit and contribution for a much wider discussion. It's also important to clearly delineate what is widely accepted as “play” from what we refer to as “tākaro” or “tākaro Māori” in this context. This article will refer to both play and tākaro as two distinct concepts, with many overlapping layers.

If we consider the concept of play, scenes of brightly coloured metal structures in softly surfaced areas come to mind. Perhaps objects of novelty (a cardboard rocket ship, a favourite toy, a competitive sport, or video game), tactile and immersive, come to the forefront. These natural associations are repeated intergenerationally and widely celebrated in society as children's pastimes. Western academics have considered play an essential element for healthy development and behaviour since as early as the 1890s, establishing play as a significant aspect of childhood learning and social growth (Hall, 1904). Throughout the early-mid 20th century, several developmental theorists cemented the idea that play is fundamental to learning and socialisation, asserting that children construct knowledge through active engagement, and that play is a key mechanism for learning (Piaget, 1945/1962); some researchers demonstrated that imaginative play helps children develop self-regulation, language, and social reasoning (Vygotsky, 1978); while others linked play to emotional wellbeing and the development of the “true self,” framing play as essential for psychological health and creativity (Winnicott, 1971). By the mid-20th century, developmental psychology widely accepted play as a critical driver of cognitive, social, and emotional development. In 1989, recognition moved beyond theory into international policy as the United Nations Convention on the Rights of the Child (1989) declared play as a fundamental right.

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Modern neuroscience and child-development research now confirm that play contributes to brain development, emotional regulation, creativity, and social skills, reinforcing earlier theories from psychology and education. Meanwhile, the everyday discourse around play remains less scrutinised. Socially, play is framed as fun but non-essential, whereas policy and child developmental fields assert that play is both fundamental and formative. Integration of these two perspectives is conceptualised through “place-based play,” where sites of recreation also serve as sources of education about the area and communities in which such sites are situated.

Tākaro is a te reo Māori kupu that is widely translated into English as play, and operationally this translation can function well in day-to-day communications. On a deeper level, this translation could be viewed as a disservice for the layered meaning and function of tākaro as a conduit for reconnecting communities to pūrākau, tūpuna, and atua that shape our world and inform how we move in it and with it. Unlike place-based-play, “place-based tākaro,” is a pleonasm of sorts; a redundant phrase like free gift, where the same idea is repeated in different words. In te ao Māori and te reo Māori, context is key, and the Māori worldview contextualises in relation to whenua and whakapapa. Traditional games function as vehicles for transmitting knowledge, physical skill, and social values, and are embedded in tikanga and whakapapa (Brown, 2008, 2012). This demonstrates how play connects participants to landscape and collective identity and reinforces the role of tākaro as both pedagogy and cultural resurgence (Waiti & MacLean, 2013).

Non-Māori Indigenous research similarly recognises play as an integral component of relational learning systems grounded in land, culture, and community (Cajete, 1994; Howard, 2010). These perspectives challenge Western developmental frameworks by positioning play not merely as a stage of childhood development, but as a lifelong cultural practice through which knowledge, identity, and ecological relationships are sustained. Therefore tākaro, and other forms of Indigenous play, can be defined as a living ethical practice that pushes beyond neurological and social development and into the realm of collective conscientisation.

The underpinning assertion is that tākaro constitutes an intentional act of decolonisation. By examining the levers that uphold nationalism and colonial erasure, this article attempts to demonstrate how tākaro can disrupt entrenched inequities and inspire a resilient and informed society. Ultimately, it positions tākaro as both praxis and philosophy: a decolonial technology that teaches communities how to live together in balance, resilience, and care.

And so, “the play problem” exists in the convergence of Western and Indigenous ideologies: tākaro is not inherently interchangeable with play yet is often linguistically and socially positioned as such. Without delineation, we limit the healing capabilities of tākaro for whānau, communities, and society as a whole.

Whakapapa of Play: Memory, Knowledge, and Belonging

Tākaro is deeply entwined with whakapapa, acting as a medium through which intergenerational knowledge is transmitted. Play anchored by whenua allows people of all ages to embody history and ethical frameworks by encoding complex relational logics: reciprocity, collective responsibility, and respect for the environment, which offer a living curriculum for ethical and social development (Tawhai, 2010). Far from abstract, these are embodied teachings that are learned through movement, laughter, healthy competition, and cooperation.

For example, kēmu like kī-o-rahi are structured around landscapes and embody teachings of conflict, alliance, and guardianship (Brown, 2008, 2012; Mutu, 2011) that remain invaluable to communities today. Engaging with these games is an enactment of cultural memory that asserts belonging and resists colonial definitions of play as mere entertainment. These practices not only preserve ancestral knowledge but reinforce intergenerational responsibility and relational decision making. Through such play, ancestral logics are reactivated in the present, reminding the collective that every action is part of a wider genealogy of learning.

Tākaro challenges the individualistic competitive paradigm dominant in Western sport and ideology, offering instead a model centred on connection, care, and environmental stewardship. It resists the colonial framing of play as a site of discipline and productivity, insisting instead that play is a site of relational ethics and collective healing. In doing so, tākaro exemplifies how Indigenous practices can inform modern educational and social interventions and provide measurable benefits.

Indigenous scholars globally have long emphasised that learning occurs through participation in culturally grounded practices that are embedded in land, story, and community. For many Indigenous societies, knowledge is not transmitted solely through formal instruction, but again through relational engagement with place, movement, and shared experience. Cajete (1994) described Indigenous education from a Tewa perspective as an ecological process in which children learn through observation, participation, and play within the landscapes that sustain their communities.

These practices cultivate an awareness of reciprocity between people and environment, reinforcing social responsibility alongside personal development. When viewed through this lens, tākaro Māori can be understood as a part of a wider Indigenous pedagogical movement where games and playful practices act as transmitters of knowledge, values, and collective identity across generations.

Hauora ki te Tangata: Play as Holistic Wellbeing and Connection

Cultural practices function as protective, preventative, and restorative health measures, fostering social cohesion and emotional intelligence in ways that Western health interventions chronically overlook (Jackson, 2011).

By positioning tākaro as a health practice, we connect Māori knowledge systems to contemporary public health discourse, demonstrating practical applications beyond cultural preservation. In this sense, tākaro is medicine: a communal act of care that restores equilibrium between people and place, mind and body, self and collective.

Play/tākaro, translated directly and applied in a New Zealand policy context, refers to spontaneous, intrinsically motivated activity that is freely chosen, personally directed, and not driven by any predetermined outcomes; it is characterised by enjoyment, creativity, imagination, and social interaction, with limited external control or imposed rules. It is universally recognised as central to children's wellbeing and life-skill development in research and policy circles. Play/tākaro is described by the Ministry of Health (2017) as a vital part of children's growth that is instinctive, creative, and adaptable, performed for no external goal or reward, and integrated with cultural concepts of movement and learning. The Ministry of Education (2017) describes learning as occurring through a broad range of play-based experiences that empower children to explore, communicate, and develop dispositions for lifelong learning.

Within Aotearoa, Māori education research similarly emphasises the transformative potential of culturally grounded learning frameworks. Indigenous education initiatives succeed when they centre Māori knowledge systems, values, and community aspirations rather than attempting to adapt Māori learners to existing colonial institutions (G. H. Smith, 2003). This perspective reframes education as another site of political and cultural transformation rather than simply a mechanism for skill acquisition; tākaro Māori can therefore be understood as an educational practice that aligns with kaupapa Māori principles, providing experiential learning environments where knowledge, identity, and wellbeing develop simultaneously.

This is a promising direction that reflects a bicultural understanding of play. For many Indigenous communities, the reclamation or reinterpretation of play becomes a way to assert identity and rebuild social cohesion in the face of disruption.

The Machinery of Erasure: Colonialism and Nationalism

Colonialism has systematically sought to redefine land, bodies, and knowledge across the globe, and by framing these processes as ongoing instead of historical, we emphasise its persistent nature.

The intersection of nationalism and colonialism has profound impacts for all “New Zealanders”: Māori, Pākehā, and Tangata Tiriti alike. The colonial project is not only about seizing land, but also about shaping the imagination through manufactured social hierarchies, dictating who can belong, who can play, and whose knowledge counts as truth.

Socioeconomic structures built through land confiscations and class stratification have limited access to spaces where play and cultural transmission can flourish (Jackson, 2011). By inspecting these mechanisms, we begin to connect structural oppression directly to the marginalisation of tākaro as a cultural practice.

Colonialism is not solely a Māori issue. The British Empire taught societies to vilify their own populations by portraying people in poor communities as criminals and morally questionable. Historically, the Crown offered redemption through military service deployed against Indigenous populations (Belich, 2009; Canny, 2001), while modern levers are more covert and entrenched. These strategies weaponise poverty, transforming desperation into complicity, and manipulating people who are themselves colonised yet willingly rewarded for enacting colonisation elsewhere. Distilled through generations, a broader global logic of identity through access and privilege evolves and, in turn, secures participation in divisive ideologies. History continues to warn us of the colonised-to-coloniser pipeline, and the devastating impacts of ignorance.

Studies further illuminate the structural dynamics underlying these processes, with Veracini (2010) arguing that settler colonial societies are not merely historical events but ongoing political formations that seek to reproduce themselves, securing land while simultaneously displacing or assimilating others. Within this framework, cultural practices that reinforce Indigenous identity, governance, and belonging are a challenge to the stability of settler states. Activities such as language revitalisation, storytelling, and traditional play therefore become politically significant because they sustain relationships to land and collective memory that contradict settler narratives of legitimacy. The suppression of Indigenous play practices can thus be interpreted as part of a wider attempt to weaken relational knowledge systems that affirm Indigenous sovereignty.

An Empire’s Playground: Sport and the Control of Bodies

Similarly to education, religion, and social policy, sport can also be a vehicle of assimilation by privileging commercialised games while discouraging tākaro Māori (Palmer, 1987). Colonial sport policy, under the guise of “civilising leisure” sought to produce disciplined bodies aligned with imperial values.

Hokowhitu (2004) demonstrated how colonial narratives constructed Māori masculinity through racialised notions of physicality and savagery, which were then channelled into state-sanctioned sporting practices. These systems simultaneously celebrated Māori athletic ability while suppressing Indigenous forms of physical culture that did not conform to Western sporting values. In this context, the privileging of commercialised and codified sport functioned as a mechanism of assimilation, replacing relational and culturally embedded forms of movement with competitive structures aligned with imperial ideals. The marginalisation of tākaro Māori can therefore be understood not as incidental cultural loss but as part of a broader colonial project to reshape Indigenous bodies and identities.

This pattern is not unique to Aotearoa: in Hawai’i, surfing was banned by missionaries alongside hula and hula-based games, only to be commodified for tourists (Kanahele, 1986). In North America, Lacrosse (a medicine game) was criminalised and stripped of spirit before being absorbed into elite White universities and social circles. In Canada, residential schools removed Indigenous children from their families, suppressing traditional games that encoded cultural knowledge and

governance principles (Truth and Reconciliation Commission of Canada [TRC], 2015). In Australia, the doctrine of terra nullius provided the moral and juridical foundation for violent suppression of Indigenous culture, languages, play, and systems of governance (Attwood & Markus, 2007; Reynolds, 1996). Everyday expressions of Aboriginal and Torres Strait Islander life were and continue to be criminalised and punished as mechanisms of control (Broome, 2019; Haebich, 2000).

Within this worldview, language, story, and play are recast as primitive, and their suppression justified through the civilising mission of the empire (Pascoe, 2007). These acts of erasure sought to sever people globally from ancestral lands and each other, transforming the freedom of play into a site of surveillance and obedience: a strategy consistent with the genocidal logic of assimilation (L. T. Smith, 2021; Tatz, 1999).

Manufactured Identities: Settler Complicity and Collective Amnesia

These processes were not limited to the direct regulation of Indigenous populations, as the architects of settler colonial societies simultaneously produced new identities for the settlers themselves.

National myths framed colonial expansion as progress, while obscuring the violence that made it possible, and, over time, these narratives have encouraged settlers to forget their own historical experiences of dispossession, class exploitation, and migration. These histories are replaced with a curated national identity that promises belonging and social currency. Research argues that such identity formation is essential to the stability of settler states: by normalising the occupation of Indigenous land and reframing it as national destiny and ultimate progress, colonial societies further obscure the ongoing nature of dispossession (Veracini, 2010; Wolfe, 2006). Historians reaffirm that such processes are central to imperial expansion: Indigenous knowledge systems are delegitimised so that colonial institutions can replace them as the sole legitimate authority over land, law, and social order (Pascoe, 2007). Yet again, this underscores how the suppression of play was not incidental; the freedom of play has gradually transformed into a domain of surveillance and control, aligning with assimilation policies (L. T. Smith, 2021; Tatz, 1999).

Collective amnesia describes forming a national identity that is detached from the histories that produced it. In Aotearoa, the construction of a homogenised “Kiwi” identity encourages people to prioritise individual achievement and patriotism, a concept often presented as “equality,” “unity,” or “oneness.” These narratives of equal opportunity obscure the structural inequalities that continue to shape relationships between the Crown, Māori communities and wider society (Mutu, 2022). It is essential to understand that colonialism is not solely a “Māori vs Crown” issue; it also seeks to erase Pākehā and Tangata Tiriti history and identity. Within this framework, cultural practices such as tākaro become politically significant. Their revitalisation disrupts the amnesiac effects through reconnection and true inclusion. In doing so, we can expose the fragility of the myths upon which settler nationalism depends.

Recent events across multiple settler states underscore the ongoing consequences of these systems beyond Aotearoa. In Australia, the Northern Territory Coroner’s Office reported a record number of Indigenous deaths in custody, with 12 recorded in 2025 alone, highlighting systemic failures in the justice system (Schmidt, 2025). Similarly, in Canada, the discovery of unmarked graves at former residential schools has brought to light the systematic genocide of Indigenous children, and prompted national reckoning (Government of Canada, 2024). Parallel logics are evident in Palestine, where Indigenous people continue to resist a settler-colonial state built on the dispossession of land and the erasure of memory. The United Nations Independent International Commission of Inquiry (United Nations Human Rights Council, 2025) and Amnesty International (2024) determined Israeli state forces, under the banner of nationalist security and divine entitlement, have carried out acts of genocide against Palestinians through international war crimes such as mass killing, collective punishment, and the deliberate destruction of civilian infrastructure (Pappé, 2006; Shalhoub-Kevorkian, 2023; Wolfe, 2006).

While these contexts differ historically and politically, they reveal a shared logic: nationalist states frequently mobilise narratives of security, destiny, or divine entitlement to justify the ongoing dispossession and the consolidation of territorial control. So, these acts are not aberrations, but expressions of a global order in which nationalist states weaponise belonging, land, and fear to secure dominance; reminding us that colonialism is not a historical anomaly but an enduring system of extraction, control, and erasure.

Colonial administrations recognise the power of practices like tākaro and frequently target them precisely because they foster forms of belonging that exist outside the authority of the state. When communities gather to play, tell stories, and move together within ancestral landscapes, we reaffirm systems of knowledge and responsibility that colonial governance actively seeks to dismantle. In this light, tākaro is not only resistance, but essential to repair, restoration, and societal resilience.

Reclaiming the Field: Tākaro Against Nationalism and the Far Right

Tākaro not only serves as restorative praxis but can be positioned as a preventative measure against further disconnection and political extremism.

Modern nations are not ancient or natural formations but socially constructed political communities built through shared narratives, rituals, and symbols that define who belongs and who does not (Anderson, 1983; Hobsbawm, 1983). Tākaro offers an alternative framework of belonging that resists these exclusionary logics. Rather than grounding identity in rigid territorial or racial hierarchies, tākaro is embedded within whakapapa, collective responsibility, and relationships to land and community. These relational frameworks align with broader knowledge systems that prioritise reciprocity and collectivism over individual competition or nationalist ideology. By reinforcing social bonds through shared practice, tākaro cultivates forms of belonging that are inclusive, dynamic, and resistant to appropriation. Such recognition of collective rights, cultural continuity, and community governance counters ideologies that seek to monopolise national narratives and marginalise minority populations (Palmer, 1987).

Challenges to dominant national narratives are destabilising because they expose the historical foundations of colonial power (Veracini, 2010; Wolfe, 2006). In Aotearoa, where far-right rhetoric increasingly seeks to distort history and portray Māori assertions of sovereignty as threats to national unity, such cultural practices carry renewed political significance.

Tākaro therefore operates as subtle intervention by foregrounding cooperation, relational accountability, and shared joy; it disrupts the competitive and hierarchical frameworks often mobilised within nationalist discourse. In doing so, it destabilises the binaries of “insider” and “outsider” identity politics upon which exclusionary nationalism depends. The field of play becomes a site where community relationships are reaffirmed, and new solidarities can emerge across generations and cultures. Through these processes, tākaro functions simultaneously as shield and strategy: protecting cultural memory while generating possibilities for more inclusive and relational futures.

Tākaro as Decolonising Praxis

Simpson (2014) argued that Indigenous knowledge is produced and sustained through everyday interactions with land, relationships, and community practices. In this sense, cultural activities such as storytelling, ceremony, and tākaro function as forms of “land as pedagogy,” where knowledge emerges through lived participation rather than institutional instruction. Tākaro Māori aligns closely with this framework. By engaging bodies, landscapes, and ancestral knowledge simultaneously, tākaro becomes more than recreation; it is an enactment of resurgence that reaffirms relational governance systems and collective memory. Tākaro does not exclude but instead seeks to form bonds and understandings across people and culture. This positions tākaro as civic engagement, cultivating agency and encouraging communities to assert sovereignty through cultural expression and spatial occupation (Tawhai, 2010). In this way, tākaro becomes protest in the deliberate act of existing, learning, and thriving as a diverse and inclusive society.

Internationally, Indigenous movements echo this principle. In Native American communities, revival of traditional games has been linked to improved mental health outcomes, stronger intergenerational relationships, and the reinforcement of cultural identity (Lomawaima, 2000). Similarly, Australian Aboriginal communities have leveraged traditional play to strengthen community cohesion and cultural transmission, particularly in urban contexts where colonial disruption has fragmented kinship networks (Atkinson, 2002). In Canada, the resurgence of Indigenous play functions as a reclamation of identity, teaching histories suppressed by colonial schooling and residential systems (TRC, 2015). In Hawai‘i, play revitalisation enables reconnection to genealogy and place, asserting Indigenous knowledge against ongoing cultural erasure (Kanahele, 1986). This affirms that the intentional use of play as a decolonising practice transcends geographic boundaries. By connecting these examples explicitly to Māori practice, we underscore the universality of Indigenous resilience while again situating tākaro as context-specific praxis and pedagogy, a method of remembering who we are and what we value when systems of domination try to make us forget.

Mapping a Hawaiki Hou: Tākaro as Renewal

When we position tākaro as a generative pathway toward Hawaiki Hou, a renewed space of cultural, communal, and ecological flourishing becomes palpable. By engaging children, families, and communities in play rooted in whenua and whakapapa, tākaro provides practical frameworks for education, urban planning, and health promotion that are culturally grounded, relational, and ecologically sensitive. In essence, it is an architecture of hope that rebuilds futures from ancestral blueprints.

Lorde (1988) reminded us that expressions of joy, creativity, and connection can themselves be acts of resistance within systems structured by domination and exclusion. Practices that cultivate collective wellbeing challenge colonial narratives that frame Indigenous existence primarily through deficit, struggle, and redundancy. In this sense, the laughter, movement, and shared experience generated through tākaro are not merely recreational; they represent an affirmation of life, community, and cultural continuity that resists the forces that seek to suppress.

Through tākaro, communities reclaim agency over space itself tākaro then becomes an enactment of sovereignty, asserting the rhythms, rules, and relationships of the land as a map for us to follow. As such, the practice embodies both cultural preservation and innovation, sustaining futures that are firmly grounded in mātauranga ki te whenua while remaining responsive to contemporary realities. Tākaro becomes a vehicle where the stories of all people who have arrived on the shores of Aotearoa can be brought to light, shared, and honoured. And, in doing so, tākaro opens a relational space where healing, belonging, and creativity coexist.

Conclusion: Returning Home Though Play

This article contributes to a wider conversation about tākaro Māori and other forms of Indigenous play as a multifaceted act of resistance, cultural transmission, and decolonisation that benefits all. By reclaiming tākaro, communities reconnect to whakapapa, reinforce whanaungatanga, and nurture hauora, all while challenging colonial, nationalist, and far-right frameworks that seek to divide and erase. International comparisons underscore the universality of these principles, showing that Indigenous resurgence through play is both a local and global strategy for healing, education, and empowerment.

In an era marked by social fragmentation, ecological and economic crisis, and renewed colonial pressures, tākaro offers a timeless yet dynamic solution: a practice that calls us home to ourselves, our landscapes, and each other. It is a living testament to the resilience of Māori knowledge and a roadmap for creative, sustainable and interconnected futures in Aotearoa and abroad. It invites us to remember that resistance can be joyful, and tākaro in itself is a declaration of freedom.

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GLOSSARY

Hauora	Holistic wellbeing.
Hawaiki Hou	A renewed space for cultural, social, and ecological flourishing.
Kēmu	Māori games or playful activities.
Kī-o-rahi	Traditional Māori game.
Mātauranga	Māori knowledge systems, including values, practices, and ways of knowing.
Pākehā	New Zealander of European descent.
Pūrākau	Stories that convey moral, historical, and cultural teachings.
Tākaro Māori	Māori play practices embedded with relational ethics, and ancestral knowledge.
Tangata Tiriti	Non-Māori people living in Aotearoa under the framework of Te Tiriti o Waitangi.
Tūpuna	Ancestors whose knowledge, values, and actions inform contemporary life.
Whakapapa	Genealogy or relational frameworks connecting people, land, and ancestors.
Whanaungatanga	The cultivation of relationships, kinship, and collective responsibility.
Whenua	Land or place with spiritual, ancestral, and ecological connections.

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Mana Kōhine, Mana Māmā, Mana Tinana

Curating collective (well)being in wānanga

Deborah Heke* || Jewelz Petley+ || Tracey-Leigh Te Paa~

Abstract

Ōkura Collective brought together the distinct pūkenga of three wāhine Māori, with a passion for wāhine and whānau wellbeing, to create a kaupapa that centred kōhine flourishing. Understanding the unique challenges of kōhine Māori in contemporary Aotearoa, we wanted to intentionally curate a space for them to experience ritual, learning, and healing alongside their māmā. Based on Ngā Pou Māreikura, a developing model of (well)being, we facilitated a series of wānanga, held in West Auckland, for kōhine Māori and their māmā to connect to mātauranga wāhine, atua wāhine, and taiao-based learning. In wānanga, kōhine and their māmā were able to learn about the inherent mana of wahine/kōhinetanga through movement, through taiao, and through pūrākau connected to our ancient feminine ancestors, but in their contemporary lives. In this manuscript, the three co-founders and facilitators share reflective vignettes of their experience with their pilot series and envision its future. This kaupapa demonstrates that when safe spaces are specifically curated for wāhine, kōhine, and whānau, healing potential is activated.

Keywords

Mana Wahine, kōhine Māori, body sovereignty, Ngā Pou Māreikura, wānanga, Indigenous healing, intergenerational wellbeing

Rationale

Rangatahi Māori girls (kōhine) face numerous intersecting sociopolitical challenges that impact their health, wellbeing, and educational outcomes. These challenges range from systemic racism, socioeconomic disadvantage, access to and engagement in services, and more (Came & Griffith, 2018; Greaves et al., 2021). There is a historical trend of underserving Māori at all levels, from education to health and wellbeing, and a range of other social outcomes (Bishop et al., 2009; Came et al., 2017; Fleming et al., 2020).

Systemic racism and the patriarchal influence of colonisation impact kōhine Māori uniquely—through the systematic disruption of Indigenous relationships to body, land, and identity (Mikaere, 2003; Redvers et al., 2020; Yates-Smith, 2003). Institutional racism and biopolitical control enable the imposition of dominant cultural norms reframing Indigenous women's bodies as sites of surveillance, regulation, and deficit (Jones, 2000; Million, 2013). In Aotearoa, this has manifested in the historical devaluation of mātauranga wāhine and atua wāhine; the erasure of Māori women's sovereignty over their bodies (and bodies of knowledge) (Pihama, 2001; Smith, 2012); and the complexity of their roles, significance, and prominence in Māori society and wellbeing (Heke, 2022; Murphy, 2019; Yates-Smith, 1998).

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Ashlea Gillon's (2019) critical Kaupapa Māori research centres body sovereignty and decolonising the body and it theorises body sovereignty at both an individual and collective level. She argued that, from a Kaupapa Māori and Mana Wahine perspective, it is a reclamation of power – centring kaitiakitanga, rangatiratanga, and mana tinana. In this context, it affirms the right of kōhine to define their own wellbeing and flourishing and reconnect with ancestral knowledge and practices that honour their bodies (and knowledges) as sacred and sovereign (Gillon, 2019). Body sovereignty arguably extends to wāhine bodies of knowledge – exercising individual autonomy, collective resistance, and cultural reclamation of our pūkenga, mātauranga, and generational knowledge systems (Heke, Vera, et al., 2026).

Recent data highlight the need to address the intersecting challenges faced by kōhine Māori. Māori students are twice as likely to leave school by age 16 and only 9% achieve university entrance qualifications compared to 34% of non-Māori (Ministry of Education, 2023). Addressing the mental health outcomes of rangatahi Māori also remains an issue, where despite rangatahi Māori reporting and experiencing high rates of depressive symptoms and serious self-harm injuries (Te Hiringa Mahara, 2023), they are less likely to be diagnosed or referred for treatment (Theodore et al., 2022). These outcomes are compounded for kōhine in state care, where over a third have attempted suicide in the past year and are six times more likely to be hospitalised for self-harm (Aroturuki Tamariki, 2025). These statistics reflect the ongoing impacts of colonisation and systemic racism, which continue to shape the lived realities of kōhine Māori through inadequate access and culturally inappropriate care, but also through the chronic disconnection from the cultural practices and knowledges that foster wellbeing.

What we also know is that a strong and affirmed cultural identity plays a critical role in lower depression and enhanced resilience in rangatahi (Greaves et al., 2021; Mocomoko, 2021), and enhances concepts of body sovereignty, self-esteem and overall wellbeing (Rakhkovskaya & Warren, 2014; Talwar et al., 2012). The integration of culturally responsive approaches enables learning and wellbeing contexts that allow previously marginalised rangatahi to participate in their hauora on their terms and in ways that contribute to better learning and wellbeing outcomes (Bishop et al., 2009). Kōhine Māori in contemporary Aotearoa are constantly navigating the challenges of their social realities, body image, and wellbeing – whether in whānau, community, or online. With the understanding that one of the strongest sociocultural factors relating to wellbeing is a strong mother–daughter dyad (Hershberg, 2006), there remains opportunity to support and activate this relationship in safe, culturally informed spaces.

Prior to colonial influence, ancestral parenting and childrearing were grounded in intergenerational and collective caregiving, with a strong emphasis on whakapapa and whenua. A key component to raising strong and resilient children was establishing the bond between children and their divine mother, Papatūānuku, and the other atua (Angeli-Gordon, 2025). Birthing and whenua rituals such as karakia, oriori, and karanga modelled the shift between tapu and noa. Practices such as pīkau pēpi, waiata, and pūrākau seeded and sustained identity (Angeli-Gordon, 2025; Ruwhiu, 2009). These everyday pedagogies were often imparted through the primary conduit of the mother–daughter relationship but also grounded in collective and intergenerational knowledge transfer, subsequently, raising girls who knew who they were and how to care for their themselves, their whenua, and their future whānau (Angeli-Gordon, 2025). In reclaiming mātauranga and mana wāhine today, we envision the māmā–daughter dynamic as one of the key components of intergenerational and collective wellbeing.

The Whakapapa of Ōkura Collective

The name *Ōkura* was gifted to us by Te Mete Lowman (Māori cultural and language specialist) to reflect our kaupapa and its connection to the ancient feminine. The name is derived from Ngā Uri o Kurawaka (descendants of Kurawaka), which acknowledges the sacred site of Kurawaka, the birthplace of Hineahuone (first woman formed from the red clay between the legs of Papatūānuku). This origin story asserts the mana and tapu of wāhine Māori, linking their bodies and being to the whenua and to atua wāhine. Ōkura carries this whakapapa, acknowledging and promoting the reclamation of body sovereignty, cultural identity, and intergenerational healing. It reflects our kaupapa and its intent to uplift kōhine Māori by reconnecting them to ancestral narratives that celebrate their innate power, potential, and connection to Kurawaka.

Ōkura Collective was formed by three wāhine committed to reclaiming, restoring, and revitalising the wellbeing of Māori women and their tamariki through Indigenous knowledge, connection, and aroha. Ōkura was envisioned to be a space of healing and empowerment, where intergenerational wisdom would be nurtured, and the strength of wāhine Māori celebrated. Ōkura Collective weave diverse expertise to create opportunities that uplift and sustain our people.

We were brought together by the vision of Jewelz Petley, who identified a need and realised the opportunity to engage with two other wāhine who she knew could bring complementary skillsets to the kaupapa. Jewelz facilitated our first hui and led most of the planning required to get us funding, recruit attendees, liaise with iwi, book venues, organise kai, and ensure we had a reliable online platform and brand. Her drive and enthusiasm inspired the realisation of Ōkura Collective.

Method[ological] Approach

The Ōkura kaupapa and the vignettes we present here are firmly rooted in Mana Wahine—an intentional focus on the unique and integral voice and experience of wāhine Māori, within thriving Māori communities. Mana Wahine theory derives from a Kaupapa Māori theoretical framework and serves as a critical approach to challenge and (re)address the enduring effects of colonisation and the patriarchal systems it stems from (Johnston & Pihama, 1995; Smith, 2012). Being wahine Māori in contemporary Aotearoa involves complex identity navigation (Heke, 2022). It is not a singular experience but one deeply rooted in whakapapa, where ancestral knowledge has the capacity to enable and support contemporary wellbeing (Heke, 2022).

Centred on empowering wāhine Māori wellbeing through the exploration of atua wāhine, mātauranga wahine, and taiao-based healing, Ngā Pou Māreikura is a developing model of wāhine (well)being and belonging consisting of five interactive pillars that connect wāhine with the natural environment and with themselves (see Figure 1). Ngā Pou Māreikura offers wāhine and whānau Māori the opportunity to engage with and reflect on how they relate to characteristics and stories connected to archetypes of atua wāhine/mana wāhine. The pou were initially derived from the korero of 19 physically active wāhine Māori (Heke, 2022) and were further developed to be inclusive of everyday and embodied practices.

Ngā Pou Māreikura currently exists as both a theoretical model and as an interactive installation of physical and digital works (Figure 2). These pou represent archetypes of atua wāhine and of wāhine, and pillars from which to position personal experiences or pūrākau. The pou also represent the diverse ways wāhine describe their connection to the natural environment, to wellbeing, and to themselves. Through pūrākau told via diverse traditional and contemporary practices, wāhine are invited to position themselves in physical, spiritual, or theoretical places of significance (wāhi tapu), collective knowledge systems (wānanga), and their own (wāhine) pūkenga. Ngā Pou Māreikura, as a theoretical model and as an interactive installation, seeks to empower Māori women's knowledges and capacity to connect to and heal through te taiao and through a better understanding of our relationships to/with te taiao – and consequently with ourselves.

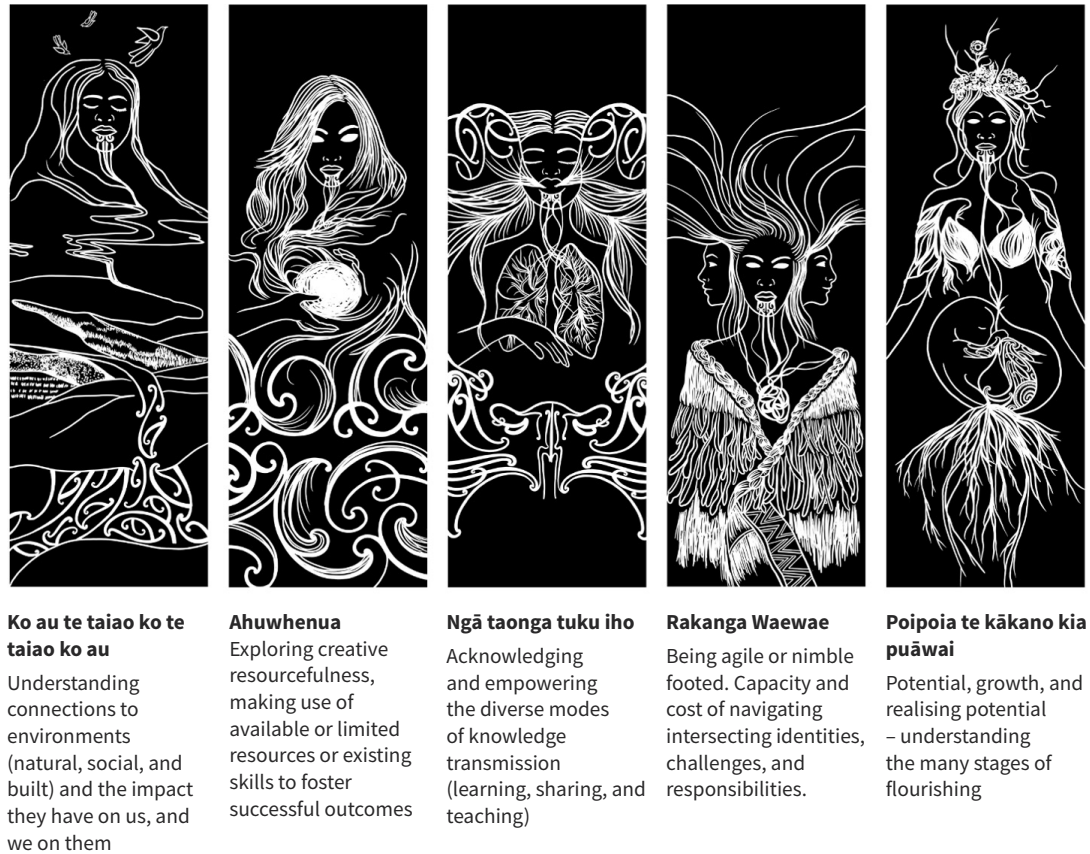


Figure 1 Ngā Pou Māreikura illustrations – by Jordan Tane

The physical pou (still in development) have been exhibited as an interactive installation, providing an intentionally safe space of reflection and learning, allowing both an individual and collective experience – immersing into a sensory space that celebrates wahinetanga (Figure 2). The space is about whakawhanaungatanga: building connection with self and others.

Ngā Pou Māreikura forms the foundation from which our wānanga series evolved. We planned wānanga to align with each pou: attributed atua wāhine and then developed a set of activities that would encompass learning associated with both. Kōhine and their māmā would begin a journey of learning about ritual practice (pure), maramataka, pūrākau from local mana whenua, (taonga) tākaro, taonga pūoro, rongoā, and atua.

While we do not provide in-depth detail of each wānanga here, an outline of some of the activities is provided in Table 1. Primarily, we reflect on how we, as facilitators and co-founders of Ōkura Collective, contributed to the evolving alchemy of this powerful kaupapa. Our individual contributions here mirror those we offered in wānanga – diverse, optimistic, and grounded in hope for our future mana wāhine.

In this manuscript, in addition to an initial background and outline of our collective and kaupapa, we provide reflective vignettes that invite the reader into our personal insights into our opening Ōkura Collective wānanga series. This means of collective writing provides an autoethnographic account where each author is invited to write freely to share their own perspective and experience (Stewart, 2023), or pūrākau (Lee, 2009) – in this case, the voice of mana wāhine. Reflective writing allows a departure from the usual conventions of academic writing to offer a unique perspective and a rich retelling of a collectively held story (Stewart, 2021, 2023). We offer these personal reflections to disseminate our learnings but also to better understand our kaupapa and its potential future iterations.



Figure 2 Exhibition of Ngā Pou Māreikura at Ngā Wai o Horotiu Marae, where attendees were invited to respond to visual and sensory prompts

Table 1 Brief outline of Ōkura wānanga delivered

	Location	Activity	Pou	Atua wāhine
Wānanga 1	Cornwallis Beach	Pūrākau and kōrero about ritual, maramataka, and karakia.	Ko au te taiao ko te taiao ko au	Parawhenuamea, Hinemoana
Wānanga 2	Old St Michaels Church, Henderson	Ngā Pou Māreikura Immersive experience, Active Whakapapa hikoi (Te Kawerau ā Maki)	Ngā taonga tuku iho	Mahuika
Wānanga 3	Corban’s Estate Grounds	Pūrakau, tākaro. Ukutangi (taonga pūoro) claywork. Led by Nikki Penetito-Hemara (Kori Collab)	Rakanga waewae	Hineahuone, Hinepūtehue, Hinetītama
Wānanga 4	Te Pae o Kura	Romiromi, Ikura and sustainable menstrual products, creating personal ritual with rongoā	Ahuwhenua, Poipoia te kākano	Papatūānuku, Hinenuitepō



Figure 3 Rongoā, taonga, and sustainable ikura products displayed from Wānanga 4



Figure 4 Participants learning whai (string games) with facilitator Nikki Penetito-Hemara

Reflective Vignettes

In these personal vignettes, each author was invited to share who we are and what magic we brought to the collective, what we learned from the process, and any aspirations we had for the future of the kaupapa. This provocation continues the whakapapa of Ōkura: knowing that we descend from atua and that our potential to activate that whakapapa lies in relationality and in the collective. We introduce ourselves below to identify our tribal affiliations and organisational ties.

Jewelz Petley

An Atlantic Fellow for Social Equity with a master's in social change leadership, I specialise in decolonising economic structures and co-designing solutions that reflect Indigenous values of reciprocity, collective wellbeing, and sustainability. With over 20 years of experience in youth development, community work, and systems change, my focus is on creating regenerative, equitable futures for Māori communities. I am passionate about structural change that uplifts wāhine Māori, fosters innovation, and ensures communities thrive for generations to come. My main contributions in this project were leading planning sessions, engaging collaboration, programme design, and leading the alignment with youth development principles. As a wāhine Māori with Chinese and Pākehā ancestry, I've been on a journey to understand my own identity in a world that often told me I wasn't enough. I can see the same struggle happening now with my teenage daughter (15). I wanted to find a way to support her to understand who she is while also working on the relationship we have together as māmā and daughter. I've watched her struggle with confidence, turn to vaping, and even self-harm. As hard as that is to share, I know we're not the only whānau walking this path. Our taitamāhine are growing up in a world that doesn't always reflect back their worth as wāhine Māori, and it shows in their hauora.

With my background in youth development, I knew I wanted to bring something together that felt different – something that spoke to who we are as Māori. For me, the things that truly feed our hauora are movement, connection to culture, and rongoā Māori. That's where the idea came from for Ōkura – a programme for taitamāhine Māori in West Auckland to explore their mana through these things, and to do it in a way that's fun, safe, and grounded in atua wāhine stories.

Ōkura is grounded in Kaupapa Māori principles. It centres mātauranga, tikanga, and whakapapa, and is about collective wellbeing, strong and trusted relationships, and making sure our taitamāhine have the tools to navigate the world as Māori. These values are woven through the programme so taitamāhine can explore their own mana and identity in a space where being Māori is not just accepted but celebrated.

What Magic I Brought to the Kaupapa.

My role was to pull together a rōpū of amazing wāhine, some old friends, some new, who could bring this vision to life. Together, we created a space where taitamāhine could move their bodies, learn about hauora through a Māori lens, and connect with atua Māori in ways that made sense to them. Thanks to Sport Waitakere, we were able to run our very first pilot programme this year and offer it for free, so cost wasn't a barrier.

Learnings.

From running Ōkura, a few big things stood out for me:

- Atua wāhine are healing: The stories of atua wāhine show us that strength, vulnerability and transformation are all part of our whakapapa as wāhine Māori. These pūrākau gave our taitamāhine role models that spoke directly to their own struggles and aspirations.
- Wāhine-only spaces are healing: When the space is safe and just for wāhine, something shifts. Our taitamāhine could relax, be themselves, try new things, and know they would be heard and cared for. This sense of safety made space for honesty, bravery, and deep connection.
- Cultural identity is healing: Using te reo Māori, waiata, karakia, and whakapapa-based practices gave taitamāhine a stronger sense of who they are. It's like giving them solid ground to stand on in a world that can so easily pull them off balance.
- Rongoā Māori is healing: Focusing on holistic wellbeing helped taitamāhine feel connected to their tinana, wairua, hinengaro, and whānau. Learning about rongoā was not just about plants but about the whenua and the interwoven relationships that sustain us.

Aspirations for the Future.

Ōkura has shown me there's a real hunger for this kind of kaupapa. My dream is to see it run not just in West Auckland, but across Tāmaki Makaurau and eventually the whole motu. I want taitamāhine and their māmā to know the stories of our atua wāhine, to carry that mātauranga with them, and to use it to care for their hauora in ways that feel right to them. Because when our taitamāhine are connected to culture, to whenua, to each other, they can do anything they set their mind to. Toitū te mokopuna.

Tracey-Leigh Te Paa

I am the creator of Māreikura Rising, a kaupapa dedicated to guiding wāhine through deep healing, reclamation of whakapapa, and the celebration of their sacredness. With 17 years of experience as a māmā and Indigenous healer, I blend ancestral wisdom with spiritual insight to create safe, powerful spaces where wāhine feel seen, supported, and free to heal on their own terms. As a healer, mentor, and respected lecturer at the South Pacific College of Natural Medicine, I am known for my real, raw, and grounded approach. My magic lies in helping wāhine remember who they are and where they come from, holding space for them to journey through both the dark and beautiful places only they can reach, always knowing I'm there with them, every step of the way.

I have a passion for wāhine and our womb sovereignty through all our different stages of wahinetangata – from reconnecting, reclaiming and reimagining our relationship, our beliefs and our connection to the beauty and power of our whare tangata, to how we celebrate and create rituals and medicines that help release trauma, emotions, stress, and pain from our bodies.

I was extremely lucky to have a māmā who fostered open conversations around sexuality, who supported my whakaaro from a young age: that my ikura was actually my superpower; and who was open to sharing her deepest trauma, so I felt less shame around my own. We shared many experiences that shaped who I am today, my view of the world, and the magic that I was created to share and contribute. Losing my mother was the very catalyst for the path and journey that I now understand was created for me and how that experience supported me into the māmā, teacher and the Indigenous healer I am still becoming.

What Magic I Brought to the Kaupapa.

My pūkenga is definitely being unapologetically myself and I have a very real, raw and open approach to teaching, supported by my mātauranga, my experience, and my ability to reframe generational trauma within healing spaces. I create beautiful spaces that encourage wāhine to empower and trust themselves more than anything or anyone else, to connect to their bodies and their whare tangata so they remember who they are and the beauty of whakapapa which they come from.

Teaching wāhine to understand that the whare tangata is the accessway to our innate power, and by healing and connecting these sacred spaces, we heal and empower not only ourselves, and our whānau and communities, but we're healing future generations – that becomes a game changer!

Learnings.

My biggest learning was the importance of consultation and guidance from mana whenua when we are working within their rohe. A kaupapa that I was leading at our first wānanga was a pure; we were organised and were ready to roll when a beautiful friend from Te Kawerau ā Maki called informing me that a rangatira had said kō to all pure being held within their rohe. It threw everything and to be honest it threw me, but the learning and growing was the importance of building our relationship with mana whenua so we could be guided and informed of their tikanga. Knowing this tikanga not only honoured the mana of Te Kawerau ā Maki (which we should all be striving to do with all mana whenua in our areas), but it also honoured the kaupapa and, most importantly, kept everyone within it safe, ā wairua, ā tinana, ā kikokiko.

Aspirations for the Future.

What I'd love to see is these empowering spaces becoming the norm for our kōhine, so they feel more connected to themselves and more comfortable in their own skin. The thought of these spaces being led by kōhine, with us still there, but in the background supporting them as their pou, brings me joy!

Deborah Heke

I am first and foremost a Māmā to my own beautiful kōtiro. I earned my PhD from Auckland University of Technology (in Māori health) and am now associate professor and director of Ngā Wai a Te Tūi Māori and Indigenous Research Centre at Unitec. My work centres on Mana Wahine scholarship and the connection between movement, te taiao, and wellbeing. Recent research involves leading an inter-institutional team of wāhine with diverse skills in the creation of Ngā Pou Māreikura – a developing model of (well)being and belonging. I am passionate about Māori and Indigenous research and building the capacity and capability of future Indigenous thinkers and doers.

As a māmā to a 6-year-old daughter and someone who has tried to pack a lifetime of cultural reconnection into the last 8 to 10 years of my life, I was instantly drawn to the kaupapa of the Ōkura Collective. The opportunity to contribute to a space for kōhine empowerment through atua wāhine and Mana Wahine was an opportunity to activate my research and contribute to a kaupapa that could benefit my own daughter, one day. Although I am blissfully unaware of what awaits my daughter when she grows into this world not necessarily designed for her cultural identity to thrive, I am not willing to passively wait for it. My own journey was one that I have tried to ensure my daughter will not have to experience, so her reo is not foreign and knowledge of atua is not abstract. The spaces Ōkura fosters for kōhine and their māmā, are spaces that I would want to share with my own daughter, to grow and flourish together.

What Magic I Brought to the Kaupapa.

As an academic, I'm often engrossed in the theoretical writing, teaching, thinking, and writing again. I know that was one of the key strengths I brought to our wāhine trio, but initially it felt like a deficiency when faced with the real-life application of my research. The excitement of seeing our three sets of pūkenga starting to weave together in our first few hui, was also tinged with apprehension that I was no youth development practitioner, nor was I particularly well-versed in anything to do with teenage girls. I felt a distant but familiar fear of not really knowing what teenage girls were even like. My own, first-hand experience was more than 25 years ago. But as someone who never really felt like a "normal teenage girl" in the first place, this was going to be a potentially triggering process for my inner introverted kōhine.

I would soon realise my expertise was at the core of this kaupapa. I had a deep knowledge of Ngā Pou Māreikura because I was the one who originally developed it out of kōrero from 19 wāhine Māori (Heke, 2022) and then further developed in a wāhine collective (Heke, Mato Bartlett, et al., 2026). I would be just one part of a trio of wāhine whose distinctly unique but intersecting pūkenga would eventually foster a space of creativity, healing, and connection. Knowing that I brought the nerd-factor to our group was comforting. I could bring clarity around the concepts of Ngā Pou Māreikura, which would help guide our collective kōrero to design a wānanga series based on each of the pou.

Learnings.

What we were able to achieve, in the space of our short wānanga series, was more than I could have imagined. Despite some of the challenges around the availability of teenagers on their precious weekends, we were able to facilitate a space where kōhine and their māmā could be, learn, and start a healing process, together. I saw the genuine desire of māmā to learn alongside their daughters, to grasp the deep mātauranga wahine that they had never been taught, to watch the flourishing of young minds seeing themselves reflected in ideas, activities, and pou.

In wānanga, we realised and activated the healing potential of the collective. Māmā and their daughters were able to take tangible steps towards deepening mātauranga wahine. Kōhine and māmā were empowered by extending their knowledge and understanding of atua wāhine and te taiao, and the healing potential of engaging with/in both.

Aspirations for the Future.

As a researcher, I see the potential for this kaupapa to inform and be further informed by research: Mana Wahine research. With prospective opportunities to apply the learnings of Ngā Pou Māreikura with kōhine, I envision a model of wellbeing that encompasses the complexities of wāhine and kōhine Māori, alike. I'm excited about the potential to work alongside Te Kawerau ā Maki, to embed their kawa, tikanga, pūrākau, and hītori into future wānanga.

My aspiration for the future of Ōkura Collective is to build on the existing alchemy and bring more wāhine magic into our wānanga. I want to see kōhine step into their mana. I want them to be confident in their bodies (of knowledge), knowing they are descended from atua and their potential is endless.

Discussion

Ōkura Collective was curated to be a space of potential and powerful intergenerational healing. The reflections from each contributor reveal a shared commitment to creating safe, transformative spaces for kōhine Māori and their māmā to reconnect with their whakapapa, atua wāhine, and their bodies as sites of sovereignty. The kaupapa is grounded in Ngā Pou Māreikura, a model of wellbeing that offers both theoretical and experiential pathways for flourishing.

Our collective aspirations envision a future where these wānanga are sustained and scaled up/out, embedded within communities, and eventually led by kōhine themselves. The importance of intentional relationships is a critical foundation for the integrity and growth of the kaupapa, acknowledging the integral roles of mana whenua, whānau, and ancestral knowledge. The reflective vignettes also highlight the healing potential of dedicated wāhine spaces and taiao-based movement and learning as tools for empowering resilient cultural identity.

Importantly, Ōkura wānanga demonstrate a living expression of body sovereignty theory in practice. By centring kōhine and māmā in spaces that honour their bodies as sacred, relational, and sovereign, the kaupapa challenges colonial narratives of deficit and disconnection. Ngā Pou Māreikura provided a framework through which participants could begin to explore their own mana tinana, whakapapa, and embodied knowledge. This praxis centres wāhine Māori autonomy and wellbeing, and builds potential pathways for future application in education, health, and youth development. We have already begun a partnership with a West Auckland secondary school to offer in-school wānanga delivery of the Ōkura kaupapa – an evolution of the magic we offered in community. There is further opportunity to explore the impact of body-sovereignty praxis in wānanga, and the development of kōhine-led models that extend this kaupapa into other schools or community wellbeing initiatives.

Conclusion

Ōkura Collective has demonstrated that when wāhine Māori come together to curate intentional spaces of healing, learning, and connection, the ripple effects can be profound. Through Ngā Pou Māreikura and the collective pūkenga of Ōkura, this kaupapa follows and builds on an ancestral blueprint for culturally grounded wellbeing that is relational, regenerative, and steeped in whakapapa. The journey ahead holds promise for wider impact, deeper healing, and the continued flourishing of kōhine Māori.

Moving forward, the integration of research, deeper iwi partnerships, and youth-led leadership development will be essential to ensure the kaupapa continues to evolve in ways that honour its origins and meet the needs of future generations.

Acknowledgements

The authors (Ōkura Collective) would like to acknowledge all the kōhine and their māmā (and other whānau) for choosing to step into this healing space with us. We also acknowledge our guest facilitators who shared their pūkenga with us all.

GLOSSARY

Atua	Deity
Ikura	Menstruation
Hauora	Wellbeing
Hineahuone	First woman
Hinengaro	Mind
Kaitiakitanga	Guardianship
Karakia	Prayer
Karanga	Call
Kaupapa	Purpose
Kikokiko	Flesh
Kōhine/ kōhinetanga	Girlhood
Kurawaka	Ancestral homeland
Māmā	Mother
Mana	Authority/prestige/power
Mana tinana	Physical authority
Mana wāhine	Women's authority
Mana Wahine	Māori feminist theory
Maramataka	Māori luna calendar
Mātauranga	Knowledge
Oriori	Lullaby
Pākehā	New Zealander (European)
Papatūānuku	Earth Mother
Pou	Pillar
Pūkenga	Skill/expertise
Pūrākau	Narrative/traditional narratives
Pure	Ritual cleansing
Rangatahi	Youth
Rangatiratanga	Self-determination
Reo	Language
Rōpū	Group
Rongoā	Healing/traditional medicines
Taiao	Natural environment
Taitamāhine	Adolescent girl
Tamariki	Children
Taonga pūoro	Musical instruments
Taonga tākaro	Play treasures/traditional games
Tapu	Sacred
Tikanga	Customs/protocols
Wāhi tapu	Sacred site
Wāhine	Women
Waiata	Song
Wairua	Spirit/spiritual
Wānanga	Learning forum
Whare tangata	Womb
Whakapapa	Genealogy
Whakawhanaungatanga	Relationship-building
Whānau	Family
Whenua	Land / placenta

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Te Wharerau

Kaupapa Māori Methodologies and a Kāi Tahu Research Paradigm

Hannah Rapata*

Abstract

Completing a doctorate as a Māori researcher within a Western research institute, whilst also engaging in decolonial and cultural revitalising practices in personal and professional settings, is a journey that stretches the mind and soul. This paper traces the development of my theoretical and methodological positioning for my doctoral research, alongside reflections on the type of researcher I want to be and the research I seek to undertake.

A detailed discussion of kaupapa Māori theory, methodologies, methods, and strategies of enquiry is presented, along with a framework for a Kāi Tahu research paradigm developed through my doctoral research, “Te Wharerau.” The Te Wharerau framework is an example of an Indigenous research paradigm, used for grounding my research within localised places and knowledges. While originally developed for personal use, it may also be relevant for other taura Kāi Tahu or rangahau projects specific to Kāi Tahu whānau.

Keywords

kaupapa Māori, Indigenous, methodology, Kāi Tahu/Ngāi Tahu

Background

In this paper, I share a reflective discussion of my journey to understanding and working within and across kaupapa Māori theory, methodologies, methods, and strategies of enquiry. I also detail the Te Wharerau framework, which served as a research paradigm for my doctoral studies. Indigenous research paradigms such as the Te Wharerau framework can help Indigenous researchers bridge the epistemological divides created by the institutionalisation and colonisation of Māori peoples and knowledges.

I share my reflections and learnings with the intention that they may support other Indigenous researchers and taura in engaging with the realms of kaupapa Māori theory, methodologies, methods, and strategies of enquiry, and in creating more of our own frameworks and research paradigms.

I completed my doctorate at the University of Auckland between 2021–2024 and did a project that ended up exploring the theoretical intersections between race, data, and identity with kai from a critical kaupapa Māori positioning (Rapata, 2025). Within this research, the intersections between kai and identity were explored among Kāi Tahu rakatahi, as there was a gap in the Indigenous food sovereignty literature of rakatahi voices, particularly rakatahi with diverse experiences yet commonalities in ancestry. Therefore, my positionality as a wahine Kāi Tahu and researcher undergoing processes of cultural reclamation and re-Indigenisation made this project very personally meaningful, presenting it as a mechanism for strengthening my connections with my own whakapapa.

My reflections on kaupapa Māori theory, methodologies, methods, and strategies of enquiry are shared below and highlight some of the pathways between research theory and praxis. These discussions also demonstrate the centrality of identity in Indigenous research.

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Kaupapa Māori Theory

Theories have been described as “an organised and consistent system of general propositions used to explain and predict a specific set of social phenomena” (Sullivan, 2009, p. 517). Theories provide frameworks for understanding ideas and the relationships between ideas and all living and non-living entities and phenomena. Theory underlies research processes and guides notional and relational thinking on the complexities and constructs across research methodologies, methods, results, and research outcomes (Mertens, 2015; Tolich & Davidson, 2018). Conducting research without explicitly connecting it to an underlying theory is like building a house without a robust and tethered foundation. The research process may be able to be completed; however, the outcomes or results are at risk of falling away from the research aims and broader contexts, producing a null effect. As Assata Shakur (2021) said, “Theory without practice is as incomplete as practice without theory.” (Shakur, 2021, p.180).

The framework presented in this paper is derived from my doctoral research project that is unapologetically and strategically grounded in kaupapa Māori as a theory, methodology, and research method. Kaupapa Māori is the strength and essence of what it is to be Māori. Kaupapa Māori is not a new way of thinking, being, or doing; for Māori peoples, kaupapa Māori is in our bones (Pihama, 2010). Linda Tuhiwai Smith (2011) described kaupapa Māori as all-encompassing and not something that can be strictly defined. Kaupapa Māori is what binds us to our Māori language, culture, and identities. Graham Smith (1992) characterised kaupapa Māori as “the philosophy and practice of being Māori” (p. 2). Therefore, kaupapa Māori, in the context of research, can be a theory, a method, a methodology, and everything in between (L. T. Smith, 2011).

Research involves exploring, gathering, and testing knowledge. It is about control, resources, information, power, knowledge and struggle (R. Mahuika, 2008, 2015). Kaupapa Māori research has been articulated as a site of Indigenous struggle within the academy (Smith, 2015), which includes the struggle to exist and function in the academy and be Māori, doing Māori research. Kaupapa Māori theory is also deeply rooted in political struggle, as the development of kaupapa Māori as a research theory evolved through what has been referred to as the Indigenous Renaissance in the 1970s–1980s (G. H. Smith, 1997). This period included major events and milestones in Aotearoa New Zealand, such as the Māori language petition in 1972, the 1974 Māori land march, the 1977 Takaparawhau (re)occupation (Bastion Point) and the establishment of te kōhanga reo and kura kaupapa Māori education in the 1980s (L. T. Smith, 2021).

However, as kaupapa Māori and Indigenous research has evolved in contemporary settings, we, as Indigenous researchers, long to speak beyond our pains and colonial entrapments (Pihama, 2010; Tuck & Yang, 2012). We wish to speak of and research our dreams and transformative visions. However, describing and analysing the historical and ongoing impacts of colonialism are essential for developing meaningful strategies for transformative visions (Smith, 2015; G. H. Smith & Smith, 2018). Furthermore, kaupapa Māori research can be about finding joy in resistance – resistance through imaginings grounded in love for our people and our whenua. I hold to and speak of this joy in resistance to continue to dream of and live our collective emancipatory visions where we are all living well whilst being portrayed how we want to be.

Through processes of trust and listening, kaupapa Māori theory supports kaupapa Māori researchers to be reflexive – to not just do the research but to be a part of the research and let it change us and our thinking. This was paramount for me during my doctoral studies, removing myself from being an impartial body in the research journey, to creating bridges across the divides of person and process. By bringing our whole selves into our research, we are better equipped and safer as Indigenous researchers, no matter where our research sits, within the academy, community or somewhere in between.

Research Methodologies

In considering research methodologies as the principles and theories that guide our research methods and processes (Walter & Andersen, 2013), kaupapa Māori research methodologies become theoretical and practical approaches to research that claim Māori spaces and affirm Māori thinking, knowledge, language, and culture as central and legitimate (Pihama, 2010; G. H. Smith & Smith, 2018).

This section describes a kaupapa Māori methodological approach and demonstrates how kaupapa Māori theory developed into praxis within my doctoral research. This methodological approach can stand on its own, and it can be applied within the Te Wharerau framework presented further on in this paper.

For example, the methods and processes expressed in my doctoral project were underpinned and influenced by mātauranga Māori or Māori epistemologies (Mulholland & Tawahi, 2017; Pihama, 2010; Smith, 2015), whakapapa, Māori ways of doing, and our own researcher backgrounds or standpoint (Walter & Andersen, 2013).

These four aspects are depicted by the four pou in Figure 1. An explanation is provided of how these pou were applied in my doctoral project and how this methodology can be applied in other research projects.

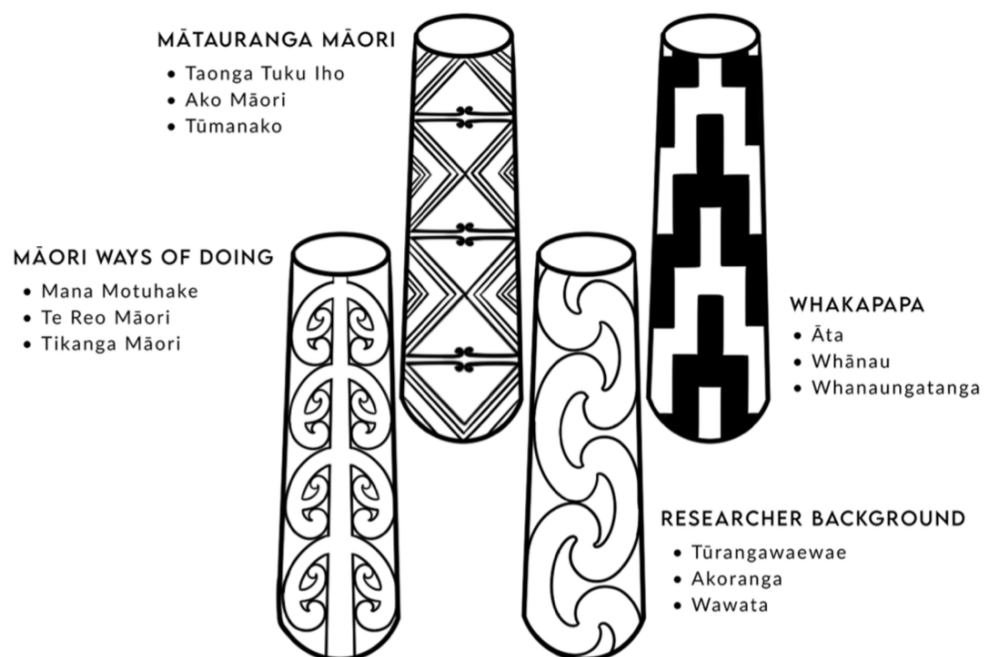


Figure 1 A Kaupapa Māori research methodology

Mātauranga Māori

Mātauranga Māori is a modern term used to refer to Māori epistemologies or Māori ways of knowing that have been gifted, used, and preserved by our tūpuna (Mead, 2025; Royal, 2012). In kaupapa Māori research, mātauranga Māori is commonly centred through key principles such as taonga tuku iho (cultural aspirations) and ako Māori (Māori pedagogy), which substantiate Māori values, views, and ways of knowing in research (Pihama, 2010). The intentional grounding within these central principles supported my research that explored Māori sovereignties, kai, and data in a way that emanates and centres mana motuhake Māori.

Furthermore, taonga tuku iho and ako Māori are inherently Māori views and principles that are tied to the unceded sovereignties, mana, and power of Māori as tangata whenua and kaitiaki. Therefore, these values can support research methodologies and projects that prioritise Māori ownership, inherent rights, and control over our resources, representations, and taonga, which connect us to our pasts and our futures (Burgess & Painting, 2020).

The third principle detailed under the pou of mātauranga Māori is tūmanako, which is a concept that embodies aspirations and hopes. Tūmanako can be epitomised through the processes of ruminating on the aspirations and dreams our tūpuna hold for us, and the aspirations and dreams we hold for our mokopuna, while connecting these aspirations and dreams across time through the actions we take as those living in te ao mārama (Burgess & Painting, 2020). Centring Indigenous research within tūmanako as a grounding principle is critical for the longevity and creativity required to complete research projects within and outside of the academy, and to complete them with the best possible outcomes for the people for whom we are doing the work (McAllister et al., 2025).

The symbol used in the mātauranga Māori pou is the niho taniwha, or the taniwha tooth, which symbolises strength, stability, whakapapa, and traditions. This symbol is used to demonstrate the strength and stability that can be found as kaupapa Māori researchers when we engage with and express mātauranga Māori despite needing to exist and operate within Western academic institutions and structures at times.

Whakapapa

The principle and embodiment of tūmanako in this methodological approach links to the concept of whakapapa. Whakapapa is a way of being, seeing, and knowing that encapsulates organisational and generational order across all living and non-living entities (N. Mahuika, 2019). The rumination and exploration of past and future hopes is a whakapapa approach to developing deeper and more relevant understandings and articulations of our research kaupapa (Burgess & Painting, 2020; N. Mahuika, 2019). In the context of my doctoral project, a whakapapa understanding and approach supported critiques I developed of colonialism and its impacts on kai, whilst simultaneously holding space for explorations that have sought to articulate what kai is, and what kai sovereignties can and will be. Drawing on the concepts of whakapapa and tūmanako enables us, as Indigenous researchers, to simultaneously sit with and across opposing and contradictory ideas and settings, while drawing out the necessary ideas and outcomes. For example, this is often done when we are engaging in research with the academy whilst also engaging with community; and when we are engaging with Indigenous research methodologies but from within colonial institutions. Therefore, the concepts of whakapapa and tūmanako support us to move through these tensions authentically.

The need for authenticity as Indigenous researchers connects to the concept and practices of whakawhanaungatanga and āta (building respectful relationships) (Pohatu, 2013). Burgess and Painting (2020) discussed the notion of whanaungatanga as being in good relation by understanding the relationships and balances between all living and non-living entities. In my doctoral research, practices of whakawhanaungatanga included karakia, kōrero, waiata, poetry writing and reading, and koha. These practices (and others) supported me in maintaining respectful relationships and connections with myself and others throughout the project and beyond.

The poutama pattern is represented on the whakapapa pou, symbolising whakapapa connections, advancement, growth, and development.

Māori Ways of Doing

Māori ways of doing are outward expressions of our whakapapa (way of being) and mātauranga (knowledge/way of knowing). Mana motuhake is a kaupapa Māori principle that denotes Māori leadership, autonomy, and control (Mutu, 2021). Honouring mana motuhake is central to Māori ways of doing and was supported in my project through privileging and advocating for Māori control and ownership over our data, stories, and representations, as well as supporting and listening to rakatahi Māori voices as experts. These approaches contrast with a lot of Western empirical research, which seeks to hold control over Māori voices and dismisses young people and their knowledge and experience due to their perceived immaturity or lack of experience (King & Cormack, 2022).

Tikanga Māori encapsulates Māori cultural practices, Māori law, protocols, and ethics. Practices of tikanga Māori are in place to maintain balance and wellbeing across all levels of whakapapa (Mead, 2003). A state of noa occurs with balance, and, generally, a state of tapu occurs when there is an imbalance. Tikanga Māori practices and protocols maintain or restore balance to a state of noa, for activities and practices to resume freely (Mead, 2003).

I sought to draw on tikanga Māori in my doctoral project through wairuatanga and kaupapa Māori ethical research practices, by seeking to listen to and follow the wairua of conversations, ideas, and practices until a state of “noho puku” was reached (Hiha, 2015). Using this approach and method across all the kaupapa I explored in my project enabled me to explore various topics and utilise various methods until a settled or balanced state was reached.

The mangōpare (hammerhead shark) symbol is used in this pou to demonstrate the strength and courage required in many instances to do research in a Māori way, particularly kaupapa Māori health research within a Western university.

Researcher Background

The conceptualisation of the four pou in this methodology was influenced by literature on Indigenous research theory and methodologies (L. T. Smith, 2021; Walter & Andersen, 2013). Our own personal backgrounds and positionalities also influence the principles and theories that guide our choice and use of methods in research. Our tūrangawaewae is our standing place, and, as Indigenous researchers, our standing place or the lands we belong to or connect to through whakapapa influence our thinking, ideas and positionalities. No matter where we are, we cannot be separated from our tūrangawaewae. Therefore, our tūrangawaewae and the lands we connect to are an ever-present influence on us and the research we conduct.

Furthermore, our position as researchers comprises many complex aspects of our beings, identities, and experiences. Under this pou I have detailed two other aspects of this that are important for researchers to be open and explicit about. This is our akoranga (profession/training path) and the wawata (aspirations, dreams, intentions) we carry for the project, for the people we work with, and for ourselves and our whānau.

For me, my training and studies as a clinical dietitian deeply influence my views and understandings in the areas of kai and hauora. However, throughout my doctoral project and the ongoing research I do, I carry an ongoing awareness of the need to question and challenge my learnt approaches, especially as I engage in kaupapa Māori research and decolonial practices.

The researcher background pou holds the tohu of the koru, which resembles an unfurling fern and symbolises strength, new developments, new growth, and new opportunities. This symbol is drawn upon here to demonstrate how, as kaupapa Māori researchers, we bring our whole selves into our work, and that we grow and develop in line with our work and the people around us.

Strategies of Enquiry

During my doctoral studies, I found it challenging at times to navigate the movement between theory and praxis, and therefore between methodologies and methods in practical and tangible ways. Cliff Whiting described research methodologies as matters of the mind and research methods as matters of the hands (Christensen, 2013). I also found the concept of “strategies of enquiry” detailed by Shawn Wilson (2008) in *Research Is Ceremony* supportive as a bridge between research methodologies and research methods. Using strategies of enquiry helped me to build upon the research methodologies I had developed and arrive at the research destination, ready to use the decided-upon methods (Wilson, 2008).

I found that strategies of enquiry are an innate aspect of an Indigenous researcher’s praxis, they are interrelated and non-linear, alongside the research methodologies and methods. The following four strategies of enquiry were used in this manner. These concepts were integral to my research praxis during my doctoral project.

I share these strategies of enquiry to demonstrate how kaupapa Māori theory and research methodologies are not just a research practice but a lived experience. Strategies of enquiry can be uniquely individual and personal, or collective. However, the following strategies demonstrate how spiritual and intellectual elements interact and influence research processes, because “for Indigenous peoples, knowledge is approached through intellect, senses and intuition” (Codero, 1995, p. 30).

Kia Noho Puku

Indigenous research strategies and methods are often a combination of existing methodological approaches and Indigenous practices (L. T. Smith, 2021). “Kia noho puku” is an example of this and translates to having a settled belly. It is an approach and principle that has been articulated in kaupapa Māori research as a strategy of ongoing critical reflection until an idea or practice sits well within you (Hiha, 2015). My ability to use noho puku as a kaupapa Māori research strategy developed particularly over the first year of my doctoral studies, while I completed kaupapa Māori health research papers. Completing these papers enabled me to gain historical insights and essential skills as a Māori researcher, including the ability to critically analyse research from a Māori perspective. I also learnt how to bring my whole self into my research and gained confidence through doing this. These processes of decolonising my mind and practice as a researcher enabled me to engage more with the concept of noho puku and trust these instinctual insights throughout the rest of my doctoral journey until issues or ideas resonated well within me.

Whakarongo

“Whakarongo” translates to listen, hear, or obey; to whakarongo means to listen with all senses: ears, eyes, mind, and heart. One must look, listen and be aware of external and internal cues, as well as tohu in the natural environment. For me, whakarongo is closely related to noho puku in that, in order to reach a state of noho puku, one must whakarongo. Across my research activities and daily life, I conduct various processes and cultural traditions to support my ability to whakarongo with my ears, eyes, mind, and heart. These include karakia, waiata, and mauri tau. These practices, in addition to receiving regular cultural supervision during my doctoral research, have often enabled me to “zoom out” and whakarongo.

Mānawa Ngāwari

In a kaupapa Māori research context, “mānawa ngāwari,” involves treading forward with a soft and kind heart, supporting good motivations for doing Indigenous research. When researchers have soft and kind hearts, with good motivations and intentions, the project is more likely to benefit all who are involved (Wilson, 2008). Mānawa ngāwari is a strategy I endeavoured to incorporate and practise during my doctoral research journey by being mindful of the centrality of humility in kaupapa Māori research practice. For me, this strategy links to the “community-up” kaupapa Māori principles of “aroha ki te tangata” and “kaua e takahi te mana o te tangata” (G. Smith, 2015), through the importance of not flaunting ideas or outcomes but continually reflecting gratitude and acknowledging the right people in the right way, as well as asking for help when it is required.

Waiata and Physical Metaphors

Many kaupapa Māori researchers find strength and inspiration through grounding in traditional knowledges and practices. In my research, I find strength and inspiration through waiata and metaphysical metaphors (Haami, 2024). For example, the metaphysical foundation of my doctoral project lies within a physical metaphor of travelling across Te Ara a Kiwa (Foveaux Strait), coming to the waka-landing place, looking up to Motupōhue (Bluff Hill), journeying up Motupōhue and then looking at the surrounds and the journey that has been. This is a journey my tūpuna did many times, and I found many metaphors between that journey and the journey of my doctoral research. For example, during my voyage, I changed “waka” (research topics and supervisors) and navigated the turbulent waters of learning to be a kaupapa Māori researcher within the academy. During this navigation, I was guided by various stars and landmarks to arrive at the waka-landing place and decide upon my research aims and objectives. This journey was guided by a traditional waiata from my hapū.

I began the second year of my doctoral journey gathering tools, ideas, and the people I needed to begin the journey to the top of “my” Motupōhue. This hīkoi can be effortless and enjoyable on a warm and sunny day. It can also be extremely challenging in other conditions, much like the undulating journey of doctoral research, and kaupapa Māori research in general. Therefore, the remainder of my project and doctoral journey was likened to making this ascent, reaching the peak, and viewing where I had come from while also giving thanks for where I had been and the things I had learnt. Since completing my doctoral journey, I now have the privilege of looking towards the horizon and speculating on the future journeys ahead for myself, my whānau, and all who have walked this journey with me. I was fortunate to travel down to Motupōhue several times during my doctoral work. Across this time, I wrote a waiata about the hīkoi up Motupōhue as a metaphor for my doctoral research journey.

I share these examples of strategies of enquiry to demonstrate the importance of finding culturally grounded strategies that enable us to navigate across te ao Māori and te ao Pākehā, which we must do as Māori researchers, whilst walking these journeys with the strength and safety of our whakapapa, our tūpuna, and our mātauranga.

Te Wharerau: A Framework for a Localised Kaupapa Māori Research Paradigm

Te Wharerau is a framework for kaupapa Māori research that was developed during my doctoral project and is inspired by my marae structure. The Te Wharerau framework serves as a research paradigm as it displays the interrelated and underlying beliefs and assumptions that guided my doctoral research; it is presented in this paper as a framework and paradigm that could guide other tauira Kāi Tahu and/or Kāi Tahu-related research projects.

The four pou outlined in the methodology above could be applied and utilised outside of this framework; however, they are the central pou within the Te Wharerau research framework depicted in Figure 2 below. Developing and grounding myself within this model was a process that helped me remain connected to my whakapapa, meaningful spaces and places, and kaupapa Māori values and principles throughout my doctoral studies.

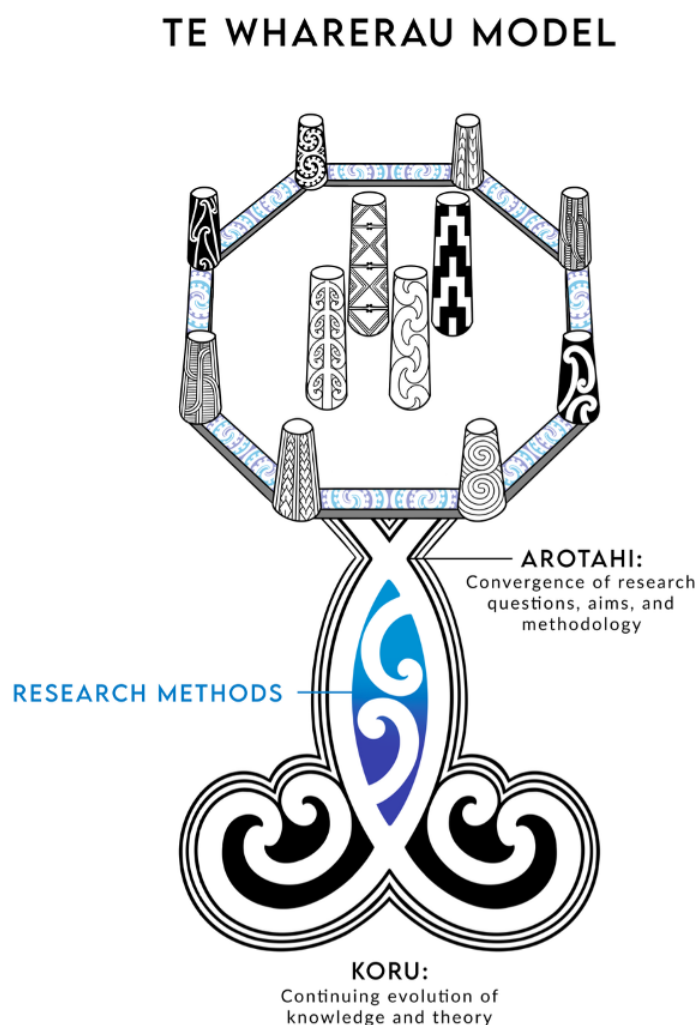


Figure 2 Te Wharerau: A research paradigm

The Te Wharerau framework is named after the traditional wharerau structures unique to Kāi Tahu. Wharerau were designed and built to be temporary spaces of living and learning as whānau moved according to the changing seasons of abundance at different mahika kai gathering sites. Te Rau Aroha marae is the southernmost marae in Motupōhue (Bluff), and one of the marae that I whakapapa to through my tupuna Wharetutu, who is one of the tūpuna within the whareniū. Wharetutu is known for her leadership and sacrifices for the survival of our hapū during the early colonial settler period in Motupōhue and Whenua Hou.

I was inspired by Te Rau Aroha marae, not just due to its personal significance to me but also due to its unique features and qualities. The marae is octagonal in shape, to resemble the traditional wharerau structures. Additionally, each of the tūpuna carved in the wharenuī are wāhine, which pays tribute to the mana wāhine of my hapū. They are wāhine who sacrificed and worked hard to preserve our whānau, hapū, and iwi in the face of devastations such as land loss, wars, and diseases. Therefore, the inspiration drawn from my tūpuna and my marae structure draws on the powers of mana wāhine, Kāi Tahu, and Indigenous resistance.

The theories and assumptions depicted by the four pou were integral to guiding me through the initial phases of this project, which involved extensive literature searches, wānanga, and kōrero on various kaupapa and topics related to my doctoral project. Just as the central four pou in Te Rau Aroha marae are structurally integral to the whole whare, these four pou were central to guiding me through the various topics and ideas as I decided what was and was not important for my research project.

Furthermore, Figure 3 is a depiction of the internal angles of an octagon and is included in this discussion to demonstrate how all the aspects or topics relevant to my project are interconnected and must go through the four central pou. This visually demonstrates my lens as a researcher that centres mātauranga Māori, whakapapa, Māori ways of doing, and a continual reflection on my personal and professional backgrounds. In the same way that all the internal angles of an octagon can connect to the four central lines, my review of topics, ideas, and potential methods throughout my project always returned to this paradigm.

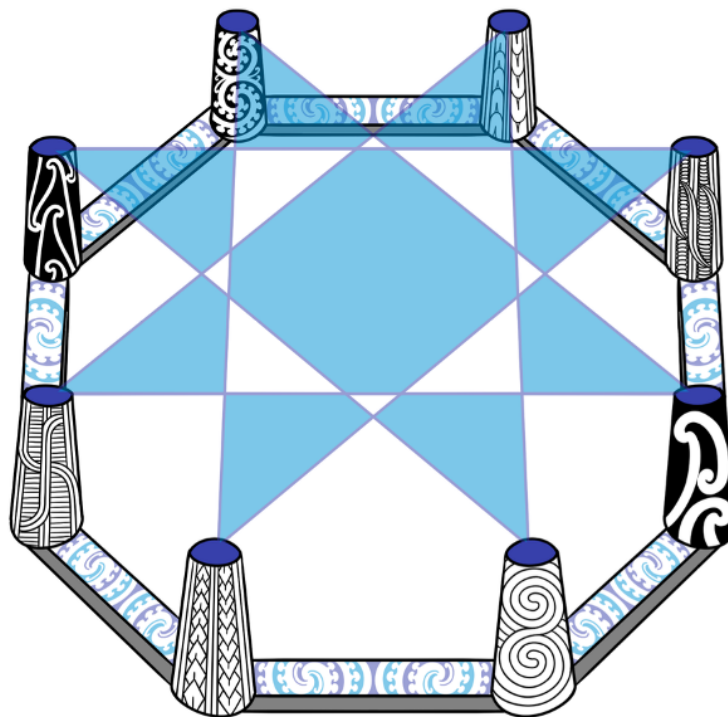


Figure 3 Te Wharerau: The internal angles of an octagon

Symbolism and Meaning in the Te Wharerau model

The arotahi (Figure 2) is the convergence point of the four central methodological pou and the kaupapa, contexts, topics, and themes that were explored in my project. Therefore, this point of convergence is where the research aims and questions are formed.

The arotahi is the meeting point for the theoretical and conceptual matters of the mind and the physical actions of the hands. Below the arotahi is a visual depiction of research methods, which includes all the actions researchers take to answer the questions and aims of the research (Figure 2). The koru, which symbolises new growth and development, represents the research outputs or outcomes because it is the continuing evolution of new knowledge and theory that support the development of changes we wish to see in the world around us (Figure 2).

Summary and Reflection

This paper presents a discussion of kaupapa Māori theory, methodologies, methods, and strategies of enquiry, as well as a framework for a Kāi Tahu research paradigm, developed through my doctoral research, Te Wharerau. My doctoral research project instigated a journey through these connections and boundaries, and I share my reflections and interpretations of this journey for other kaupapa Māori researchers who are seeing, feeling, and thinking their way across these spaces. The methodological groundings (four pou) are broadly applicable to any kaupapa Māori research; however, the Te Wharerau research framework developed through my doctoral project was created specifically for personal use; however, it could be applicable for other taura Kāi Tahu and Kāi Tahu-specific research kaupapa, and the methodological groundings (four pou) are broadly applicable to any kaupapa Māori research.

As I progress in my career as an early-career kaupapa Māori health researcher, these foundations of kaupapa Māori theory, methodologies, methods, and strategies of enquiry continue to guide both my direction and approach.

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GLOSSARY

Arotahi	Focus/concentrate on /centre point
Hapū	Subtribe
Iwi	Tribe
Kāi Tahu/Ngāi Tahu	Southern-most tribe in Aotearoa New Zealand
Kaupapa	Subject/topic
Koha	Gift or offering
Mahinga/Mahika kai	Cultivated garden/area
Māori	Indigenous person of Aotearoa New Zealand
Mātauraka/Mātauranga	Indigenous knowledge
Māori	
Motupōhue	Bluff Hill (located in the South Island)
Pou	Pole/post
Rakatahi/Rangatahi	Youth/younger generation
Tauira	Student
Tohu	Sign, symbol
Wahine	Female
Whakapapa	Heritage
Wharerau	Traditional structures built and disassembled by ancestors of Kāi Tahu

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Te Pōhā, He Kura Kāika Rua

The philosophical musings and physical manifestations of a kaupapa mahinga kai

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Abstract

A strong cultural understanding, through te reo and mahi Māori, enhances hauora while positively impacting care for the taiao. This paper outlines the theoretical and operational steps of implementing our kaupapa, Te Pōhā.

Te Pōhā is a kaupapa that provides a space for wānanga and immersion in te ao Māori through mahinga kai and conservation. These practices are centred on pūrākau pertinent to the rohe Waitaki. It is the first kaupapa of its kind in the Waitaki and will grow the puna of rangatira in the taiao.

Utilising whakapapa as an agent to weave the tauira to the taiao through mahinga kai is the content of the kaupapa. Our content was co-developed through wānanga with exponents in te reo, the taiao, astronomy, and history of the Waitaki.

The implementation of this content in a wānanga setting has had many triumphs and learnings through gaining funding and legitimacy; thus this paper serves as a resource that neatly packages pūrākau, histories, health and education benefits, operationalisation, and all associated resources for use in future proposals.

The answers to hauora sit within pūrākau pertaining to place and space. The implementation sits within the taiao; we use this paper as a reflection piece to assist the journeys of others.

Keywords

Mahinga kai, Moeraki, tuakiritanga, rangatahi

Te Pōhā is our kaupapa for rangatahi in Moeraki, and throughout the Waitaki region, that uses a Māori worldview to teach mahinga kai (food gathering) for hauora (wellness). Through delivering pūrākau and kōrero of practices that have been passed down, and finding a corresponding suite of standards from National Certificate of Educational Achievement (NCEA, the official secondary-school qualification in Aotearoa), credits are achieved for engaging in mahi Māori.

From the very beginnings, mahinga kai has been nestled within our whakapapa and is a prominent feature in pūrākau. In some iwi, the first accounts of hunting, trapping and harvesting occurred as Tūmatauenga's revenge on his brothers after he was left alone to fight a combative Tāwhirimātea (Phillips et al., 2016). Tūmatauenga felt betrayed, which caused a desire for revenge to build inside him. He achieved retribution by consuming the offspring of his brothers by setting snares and traps to capture and consume the children of his brothers Tāne, Tangaroa, Rongo, and Haumia, rendering these kai species as noa (mundane) and fit for human consumption (Phillips et al., 2016).

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In the Kāi Tahu narrative, after the separation of Raki and Papa, Tāne noticed his mother and father were laying bare in their respective resting grounds. To resolve this, he set out to find coverage for them. After cloaking his father, he sought his tuakana, Rehua, to find a suitable cover for his mother. During his visit, Tāne noticed the birds of Rehua; intrigued, he requested the birds for kai. However, as the birds were nested in the topknot of Rehua, Tāne recognised the tapu associated and passed this up. Tāne then asked if he could nurture his own birds as kai but Rehua refused as there was no suitable habitat for the birds to thrive. Rehua's instructions were to first create the habitat that would house the birds and cloak Papa. Once Tāne created the habitat, the forests began to flourish, the creatures of the forests had sustenance, and Papa was now covered and no longer bare. With his first intentions, Tāne reminds us of the musings of Rev. Māori Marsden in that we are the earth's consciousness and for Papa to continue to feed all that are on the earth it is our duty to support her life support systems (Marsden & Royal, 2003). Although seemingly trivial, these pūrākau teach us the tapu of kai if not collected following correct tikanga and, more importantly, that mahinga kai begins with creating the correct habitat before thinking about the harvest.

More specific to the takiwā Moeraki that Te Pōhā is based, the Kaihīnaki (Moeraki Boulders), which travelled on the waka atua (ship for the gods) Āraiteuru, remind us of the expertise of crew members to propagate and germinate seeds. The waka Āraiteuru travelled from Te Patu Nui o Āio to Rangiātea where they were gifted seeds, taro, and kūmara to take with them to Aotearoa. They successfully propagated crops down the east coast of Aotearoa until turbulence struck at Korotuaheka (Waitaki river mouth) and the Kaihīnaki, and the hua and the seeds were thrown overboard and remain immortalised as the boulders and the golden sand (Kawharu, 2000). The crew members, the cargo, and parts of the waka are tūtohu whenua (landmarks) that serve as reminders of the successful germination and translocation of seeds to sustain life, knowledge that has been stunted in its transmission through lack of practice.

Understand the Barriers

Māori hold inherent rights and responsibilities in relation to taonga species, grounded in whakapapa that binds people, lands, and living beings to tikanga that guide ethical relationships with the environment (Kawharu, 2000; Kawharu et al., 2024; Te Rito, 2007). These rights are affirmed and protected through foundational documents such as He Whakaputanga (the 1835 Declaration of Independence), Te Tiriti o Waitangi and the WAI 262 claim. Lodged in 1991, WAI 262 asserts Māori tino rangatiratanga (sovereignty) over taonga as guaranteed by Te Tiriti. These affirm mana whenua's undisturbed rights to participate fully in decision-making processes concerning the care, protection, and use of taonga species, which was deliberately disobeyed with the introduction of exotic species.

The systematic introduction of game species changed the landscape for mahinga kai practices (Dekker, 2014; McEwan et al., 2020; Osborne, 2000; Tipa, 2013). Native birds and water species, which provided sustenance both physically and culturally for Māori, did not provide Pākehā the vigorous competition required for sport (Dekker, 2014). As a result, acclimatisation societies, from the 1890s known as regional fish and game councils and collectively Fish and Game New Zealand, were tasked with increasing game sports and did so by importing non-Indigenous species, with the Otago Society being an early and successful adopter (Dekker, 2014). The introduction of new species brings with it ecological challenges; however, legislation brought further destruction to Indigenous species of flora and fauna (Marr, 2003; Osborne, 2000). For example, all species that threatened the adaptation of exotic species such as brown trout, rainbow trout and Chinook salmon were bountied and their removal was rewarded; these "threats" included our tuna, shags and the hawk (Dekker, 2014; Marr, 2003). In addition to eradicating Indigenous species, Māori access and ability to sustain mahinga kai practices was steadily diminished. This decline occurred through a combination of legal restrictions, socioeconomic pressures, and physical barriers exemplified by legislation such as the Tohunga Suppression Act 1907, favouring the Pākehā ideology over that of the Māori through acclimatisation societies (Stephens, 2001).

Acclimatisation societies decided who could make decisions. These decisions included what hunting equipment was allowed to be used, times of the year that certain species were available, and quotas; and, more pressingly, the requirement for licences and memberships to partake in food gathering activities (Dekker, 2014; Marr, 2003; Osborne, 2000). It is no surprise that Māori methods of collection were not permitted and Māori were held to the same licencing regulations; when using Te Tiriti o Waitangi as a defence against charges of collecting kai without a license, the argument remained that Te Tiriti only covered Indigenous freshwater fish, not the exotic introduced imports (Dekker, 2014). Mahinga kai had been systematically disestablished; continuation of these practices in these times risked a fine or imprisonment. Society members were almost exclusively Pākehā and male, and excluded Māori interests and concerns; this was highlighted in 1867 with animals' protection and The Salmon and Trout Act 1867, which were passed with no Māori representation (Marr, 2003). These grievances are still battled locally with regards to the Kāi Tahu settlement claim with mahinga kai being threatened by tides of colonisation.

The fight continues to achieve the aspirations of those who petitioned the Kāi Tahu claim to the Waitangi Tribunal, as has been documented in multiple settings regarding resources and mahinga kai sites throughout Kāi Tahu (Tipa, 2013; Tipa & Nelson, 2017); however, a pivotal aspect of these claims is the direct impact to practising mahinga kai. Mahinga kai is the “ninth tree” in the metaphorical nine-trees analogy describing Kāi Tahu's nine core grievances with the Crown (O'Regan et al., 2006). Loss of land, and therefore mahinga kai practice, influences sustenance, identity, trade, and community. It is a practice with cultural and ecological value that relies on healthy eco-systems. In the Waitaki, the aquatic environments provide sustenance for life for whānau and hapū. Mahinga kai through gathering birds and fishing as well as storing and preserving kai provided livelihoods and socialisation (Tipa, 2013; Tipa & Nelson, 2017). The immense holistic value of participating in mahinga kai – providing kai (Galvan et al., 2024; Kawharu, 2000; Russell, 2001), protecting eco-systems (Panelli & Tipa, 2009; Tipa, 2013; Tipa & Nelson, 2017), being active (Ruhe, 2021), and capturing mātauranga (Kawharu, 2000) – that is essential for positive education outcomes.

Seize the Opportunities

The educational success of Māori has been a key goal of education strategies. However, perhaps more pertinent is the success of Māori as Māori. Two central strategies targeted at achieving these goals are *Ka Hikitia—Accelerating Success* (Ministry of Education, 2013), and *Tātaiaako: Cultural Competencies for Teachers of Māori Learners* (Education Review Office, 2010). These documents, analysed elsewhere to a greater extent than will be here (Kerr & Averill, 2021); aim to guide schools to reflect te ao Māori and be responsive to Māori aspirations in their teaching and learning. Early criticisms of both strategies triangulate around the central problem: poor implementation because of the underlying system upon which the strategies are built (Ministry of Education, 2009, 2011). reports of graduating teachers lacking confidence to meet the needs of Māori students and connect with whānau highlight systemic issues failures. (Education Review Office, 2010). As a result, many Māori learners do not have their needs met; however, there is a growing appreciation for iwi-centric and Māori-centred initiatives that are proving effective (Education Review Office, 2010).

True strengths-based approaches centre upon the unwavering belief that our solutions are within our whakapapa. Acknowledging that our whakapapa encompasses our own identity as teina to te taiao reminds us of our duty of care to our resources. Strength-based approaches privilege the resources available in the environment, prior knowledge, and rich upbringings of tauira and hapori, and, more importantly, do not react to deficit framings of our tauira Māori. These approaches reflect a culturally sustaining pedagogy that states that the hauora, aspirations, and educational achievements of tauira can flourish when they are firmly grounded in their cultural identity through language, culture, and history (Gay, 2018).



Figure 1 Taura of Te Pōhā planting harakeke, 2025

Building Te Pōhā

The multiple accounts and uses of the pōhā highlight its versatility, robustness, and centrality to the taiao and sustainability. Furthermore, it inextricably benefits mahinga kai by way of food storage and transport as well as imbuing resources with mana and kaitiakitanga. The pōhā itself is manufactured from a bull kelp called rimurapa, a resilient and highly productive fucoid that grows on rocky shores with high exposure to crashing waves. Māori in Te Waipounamu have long used rimurapa as a technology to store and transport kai, especially flora and fauna in times of abundance, for times of scarcity.

Pōhā served not only as utilitarian vessels but also held considerable symbolic significance within Māori society, representing rangatiratanga. It is understood that Ngāti Māmoe were the initial occupants of the Takahanga Pā site in Kaikoura. This site was home to a pōhā named “Tohu Raumati” which stored the first harvests of each season. Maru Kaitatea, son of Kuri, ceremoniously and uncontested, ate from the Pōhā symbolising the transfer of authority and resource rights in accordance with tikanga (Poharama et al., 1998). Therefore, the significance of the pōhā as the metaphor and literal technology used within our kaupapa is steeped with intergenerational thinking and adaptation which will build the future rangatira of the rohe Waitaki.

The name ‘Te Pōhā’ was gifted to the programme by an esteemed rangatira of Moeraki. Te Pōhā has been designed as a leadership programme to harness and cultivate our future leaders to learn and stand as kaitiaki (guardians) of the takiwā Moeraki. The kaupapa is wānanga based and runs 2 days a week based at Te Whare Koa community marae. We begin our morning with karakia, engage in wānanga (in-depth discussion about the Māori worldview and stories), and then engage in an outdoors activity that embodies the lessons in our wānanga. We have been extremely fortunate to have a group of dedicated and passionate kaimahi to launch this kaupapa. To date, we have established working relationships with kura in the Waitaki that allow taura to be released to us 2 days a week on a gateway pathway. During their 2 days a week at the kaupapa, we gather evidence of their practising karakia, waiata, pūrākau, conservation, and manaakitanga to achieve over 30 NCEA credits to go towards their qualifications. The Kāi Tahu Claims Settlement Act 1998 protects rimurapa from being commercially harvested, so just as our taonga are protected, this kaupapa protects our and maintains knowledge.



Figure 2 Te Pōhā logo. Ko Aoraki te Mauka, ko Waitaki te Awa. 2025

Filling Te Pōhā

Rangatahi Māori have demonstrated that their responsibility to the taiao is because of their whakapapa to the taiao (Areta, 2023). Each surrounding element exists within the domain of atua Māori, which is maintained through practices and immortalised within pūrākau. It is whakapapa, through pūrākau, that gives context and relevance to Māori socio-environmental ethics and tikanga, through empirically derived biological knowledge and accompanying narratives (McAllister et al., 2023). It is these understandings that underpin Te Pōhā, our leadership programme.

When discussing whakapapa surrounding mahinga kai, we think of the deities who are kaitiaki of the realms from which kai is collected (J. Williams, 2010). In a mahinga kai sense, we are considering the environments where kai is founded, grown, collected, and more recently how those environments have changed over time with increases in agriculture and changes of species inhabiting waterways and land masses (Awatere et al., 2021, 2023; Galvan et al., 2024). Therefore, an understanding of whakapapa from that of the cosmos through to the scientific changes that have eradicated some species and cultivated some species over others, informs our tikanga when practising mahinga kai in the Waitaki.

The Waitaki is rich with kōrero of atua and tūpuna that have been revitalised through a number of activities. These kōrero have been documented and are beginning a revival with efforts such as Kā Huru Manu, an interactive map which has been informed by some of the earliest written recordings of placenames and associated pūrākau of the area. Other efforts such as retracing the hekenga of tūpuna also connect our generation to those who walked before and in some cases are a form of protest as some of the practices that would have maintained life can no longer be practised (Te Maihāroa, 2023). The revival efforts of Kōtahi Mano Kāika (O'Regan et al., 2006) also made intentional efforts to revisit manuscripts to revive reo, tikanga and practices, which have produced a plethora of new compositions that utilise area-specific kupu and a mapping of tūtohu whenua. In addition, Kai Tahu kura reo and wānanga reo Māori for rangatahi have increased the accessibility of this knowledge (O'Regan et al., 2018, Te Maihāroa, 2017; White & Rewi, 2014). Each of these resources push us towards a greater understanding of our richness in culture, history, and resources, which are a strong foundation upon which to build our marae.

The content of Te Pōhā centres around three marae and four key pou within each marae. These marae pertain to the different realms that we nurture and are nurtured by. As mentioned earlier, it has been our vehicle for grasping te ao Māori and te reo Māori as it is dictated by the maramataka (seasonal flow) and location-specific tikanga surrounding Te Marae o Tangaroa (waters), Te Marae of Tāne Mahuta (forests and animals) and Te Marae o Rongomātāne (cultivated foods and māra). Within each of our marae we observe our principles to ensure that we are fulfilling our roles as custodians; there are plenty of intra-pou crossover. They include tikanga, manaaki taiao, manaaki marae and tāngata whenua.



Figure 3 Tauira of Te Pōhā engaging in mahi raranga, 2025

Tikanga

This kōnae focuses on the tikanga of mahinga kai. We learn the pūrākau and whakapapa associated with different kai species as well as how these can be harvested and prepared without devastating the offspring of that realm. For example, in the marae of Tangaroa, we advise not to shuck or prepare kaimoana below the high-tide line with the respectful purposes of not displaying the mutiny of Tangaroa's children and keeping the area safe by not attracting predators (J. Williams, 2010). This also includes the learning of karakia to each deity and wānanga around appropriate use of karakia. Within this kōnae, we also learn about resource management systems such as taiāpure and rāhui, quota systems, and seasonal collection, which directly implicate the manaaki of the taiao.

Manaaki Taiao

This kōnae focuses on protecting the taiao through conservation and ethical kai collection. We look at habitat restoration, access to culturally significant sites, managing pests (flora and fauna) as well as general cleanups. We have also volunteered to assist with building new compost boxes and clearing weeds for the community māra as well as some māra of kaumātua. In ki uta ki tai (from inland to the seas), we also teach marine and freshwater monitoring with basic signs to watch for in our significant catchment sites; keeping the health of our land and waterways will ensure we have kai for future generations.

Manaaki Marae

This kōnae focuses on the roles of the ringawera on the marae and health and safety tikanga around kai. We cater events at the marae that teach tikanga in the wharekai, roles and responsibilities of the ringawera, methods of food preparation and preservation, and manaakitanga for manuhiri. As we are building rangatira, we also begin the hōtaka with a pōhiri and expect them to run their own as the final assessment. This kōnae includes participation in pōhiri, waiata tautoko, and karakia; and learning the importance of maintaining each of these practices that are integrated with our intimate knowledge of Moeraki.

Tāngata Whenua

This kōnae focuses on Moeraki and the Waitaki. We believe that to be custodians of the takiwā, we need to know its histories and how to maintain and keep that history relevant. This mahi includes learning the original placenames of the takiwā, the traditional harvests and seasonal food preparation, and how we as kaitiaki can continue to preserve knowledge and physical spaces in order to teach this to all those without this knowledge.

The overarching element incorporated into each of the kōnae is te reo Māori. Te reo Māori is built into everything and there is an expectation that participation in this kaupapa will lead to an intermediate understanding and comprehension of te reo Māori, especially when practising mahinga kai with regards to equipment and specific actions. With such a breadth of content covered, we also have a say in what matters most for how we measure success.



Figure 4 Te Pōhā, completing dive training, 2025

Testing Te Pōhā

One of the areas of interest within the kaupapa is our measure of success. As has been pointed out in the literature, being able to define success in line with te ao Māori and Māori aspirations will build a generation of Māori who are celebrated for their intimate understanding of Māori identity as a strength (Kerr & Averill, 2021) Māori worldview acknowledges a holistic understanding of health and collaborative approaches as key strengths which should also be the underpinning worldview when considering methods of evaluation.

Impact generally refers to areas of both positive and negative influence flowing directly from research and research processes; thus, evidence produced by research is perceived as impactful if it can lead to greater societal function (Martel et al., 2020; Smith, 2001). As it stands, impact tends to be measured in accordance with academic significance rather than being driven by the positive health and social outcomes of communities. As well as assessing academic achievement through credits and recording attendance, have been presented with a unique opportunity to measure the success of the kaupapa through each of our three marae and their pou.

We collect baseline evidence of understandings of kaitiakitanga, and the dreams and aspirations of our rangatahi for themselves as individuals and te iwi Māori, which we compare their responses post completion. In addition, we collect their honest feedback on whether we cultivated an area for them to grow as Māori and as mahinga kai practitioners. In addition to personal reflections about themselves, we invite feedback from their whānau and kaiako to gather further insights into their changes. This feedback gives us invaluable insight to ensure appropriate delivery for our next round. As well as feedback about their experiences of the programme, we collect feedback from the taiao about their impact.

We have been fortunate to have access to land and waterways that we are able to monitor and have a relationship with the local conservation group (Whiria te Waitaki). Through this work we have set traps for rats, stoats, and possums, and monitor water quality. Each of these can provide us evidence of our impact on our sites by seeing changes in habitat quality for native species of flora and fauna as well as the potential impact we have on foliage growth with the removal of pests (Bassett et al., 2017; Coomes et al., 2003). As well as measuring the increased quality of the habitat, we also measure the quality of the microbiome within tauria's nasal passages; research suggests that those who spend the majority of their time outdoors have greater microbiome diversity (Coomes et al., 2003). In addition to learning new skills, we can measure their success through their proficiency in tikanga and health and safety when partaking in mahinga kai practices.

This is a kaupapa about mahinga kai; therefore, we need to know whether tauria possess abilities as mahinga kai practitioners. This includes assessing their knowledge and comprehension of deities of the realm from which the kai was collected, tikanga associated with the species, step-by-step methods of mahinga kai (setting a hīnaki, rigging a fishing rod, setting and dispatching a trap). We also track the number of meals or kai provided to feed the hapori. Lastly, we assess their use of te reo Māori as well as the ability to stand in te ao Māori by comfortably working a ringawera for kaupapa and having the ability to plan and deliver a mihi whakatau/pōhiri. The skills that we teach to these rangatahi will be skills that they will then pass on feeding the iwi with kai and with mātauranga.

Feeding the Iwi

Te Pōhā is the first kaupapa of its kind in the Waitaki. It has already made short-term changes while harnessing the potential to make sustained changes in a multitude of ways. Transformation has begun to occur at the personal level (educational outcomes and behavioural shifts), the hapori level (resourcing whānau in need with kai, skillsets and all-round assistance), the takiwā level (taiao conservation – healthy waterways and land) as well as intergenerationally through maintaining practices of te ao Māori (such as te reo Māori, mahinga kai, karakia, waiata, place names etc). Filling Te Pōhā requires intimate knowledge of place and space. Each component is filled with mātauranga that sustains the whenua and the hapori and affords ample lessons for our rangatahi to grow into kaitiaki and rangatira of the takiwā and of the practices.

The kaupapa personifies kai as the vehicle for tino rangatiratanga, a nourishment of hauora through self-determination and returning Māori to the taiao (Renall & Te Morenga, 2025). Sovereignty over kai, understanding where it comes from and how to produce it, is empirically recognised as an encouraging motivation to revive traditional kai practices and become more intuitive with nutrition and wellbeing (Moeke-Pickering et al., 2015). Although nutritious kai is the tangible product, the whakapapa and sequencing of events, such as revitalising traditional knowledge and practices that

reconnect our rangatahi to our tūpuna, enhance hauora through consolidating understanding of one's whakapapa and therefore increasing notions of belonging (Pihama et al., 2025). The growth in confidence that is required for rangatahi to experience potential increases in hauora outcomes is possible through this kaupapa and mahinga kai practice, although it is perhaps made possible through the centring of te ao Māori.

Māori-Driven Kaupapa

It is not the intention of this paper to remind the reader of the health, education, and socioeconomic disparities for rangatahi Māori. Instead, it is an answer to the obvious call for Māori-centred kaupapa to inform programmes and policies (McAllister et al., 2023) to bolster identity as Māori, which has a host of benefits for mental health (Apiti et al., 2023; Te Huia, 2015; Theodore et al., 2022; A. D. Williams et al., 2019) and overall hauora of rangatahi (Highfield & Webber., 2021; Latimer et al., 2022; Webber et al., 2024). These factors are especially important for rangatahi during the schooling phases.

Kura is a milestone transitional stage for identities of rangatahi Māori (Kukutai & Webber, 2017; Te Huia, 2015). It is a difficult period where negotiations of identity arise between te ao Māori and Western-centric views, which are exacerbated when faced with discrimination and racism (Matika et al., 2021). Negative experiences of kura can affect rangatahi's academic performance and can decrease their affinity to reconnect with their Māori identity (Apiti et al., 2023; Te Huia, 2015; Te Rito, 2007; A. D. Williams et al., 2019), both of which have profound impacts on hauora. Unfortunately, this is all too common in areas where te ao Māori is not prioritised, or there is a lack of expertise to provide the teachings required to nurture Māori learners. By failing to nurture this Māori learners, the culture, the land and the mātauranga, generations to follow will miss crucial teachings to effectively stand as kaitiaki.

In building kaitiaki, our main teachings are the worldview of the Māori that this land is never ours, we are just caretakers for the next generation. In a literal sense, this understanding leads to positive intergenerational outcomes by ensuring that the land is sustained for another generation; however, more importantly, the customs and traditions of place (such as correct place names, rituals, food sources, safety precautions) are maintained and passed down to future generations. Through our mahinga kai practices at specific sites throughout the Waitaki, these traditions and practices (karakia, waiata, rules of conservation, weather patterns) are taught with the expectation that these will then be taught to whānau and hapori groups. Another aspect of being kaitiaki is the guardianship of people. An outcome of participation in Te Pōhā has been the response to calls to action for tautoko at numerous kaupapa such as karakia, wānanga, and hui. The tauira of Te Pōhā have access to resources that are valuable to hapori members, such as paddocks of animals, wood and pinecones for warmth, māra to grow vegetables and herbs, and skillsets (kai gathering), as part of being kaitiaki of these places and the products of place; to care for the people, these resources can also be shared to those in need.



Figure 5 Te Pōhā catering a wānanga rongoā at Moeraki Marae, 2025

The Taiao, the Classroom, the Healing

Education in the outdoors is not a new concept, but perhaps the focus on helping the outdoors survive over surviving the outdoors may be. We are in a unique position in iwi- and hapū-led spaces to design our own environmental experiments through observation (Hikuroa et al., 2025). As has been mentioned, the monitoring of air and water quality, pests trapped, and food species gathered across different sites can give data that will allow for future planning. These data allow our rangatahi to consciously take charge of areas that require attention, and identify areas that are abundant with particular resources and take a proactive approach to seasonal change and thinking about preservation of kai, which has monumental impacts on hauora (Hikuroa et al., 2025; Reihana et al., 2021).

A positive wellbeing has flow-on effects to school attendance and success, employment opportunities, and positive relationships with friends and whānau all of which which positively impact the wider community (Dawson et al., 2013; Highfield & Webber., 2021; McRae & Averill, 2021). It must be acknowledged that through processes of colonisation and land loss, the connection to such lands, land practices, and identity was severed, which has had proven mental health ramifications (Dekker, 2014; Ellison-Loschmann et al., 2024; Williams et al., 2019). Therefore, for tāngata Māori, understanding and addressing Māori mental health through the environment has an overwhelmingly significant impact on all facets of life (Panelli & Tipa, 2009).

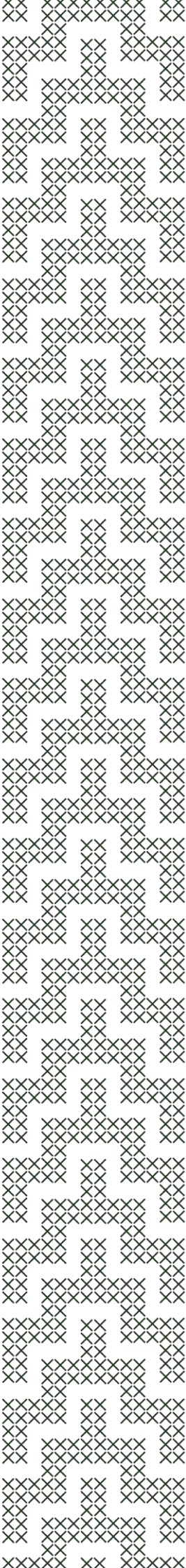


Figure 6 A taura of Te Pōhā setting the hīnaki, 2025

Participating in mahinga kai as kaitiaki provides a multitude of benefits for hauora. Healthy environments with better air quality, bacterial diversity, controlled levels of pollution, and safe recreational areas (Styles et al., 2023) have been associated with positive behaviours such as increased levels of physical activity and engaging with the outdoors, which have a range of benefits across mental, physical, and physiological spectrums of wellness (Dzhambov et al., 2017; Mavoa et al., 2019). Additionally, by culling ungulate species such as pigs and deer, we can supply kai to hāpori (Wilson et al., 2015) as well as preserving native flora, preventing the spread of potential diseases (Bassett et al., 2017) and improving the chances of native regrowth, thus increasing biodiversity and maintaining habitats for native species (Figgins & Holland, 2012). Additionally, being out in the marae of our atua, away from distractions and grounding in the environment have also proven to prevent mental distress (Stewart et al., 2025). Thus, while the environment provides physical sustenance, in kai, for tāngata Māori, it also supports the spiritual through an understanding of identity and connection to practices that our tūpuna used for provision. We do understand however that connections to the taiao vary considerably between individuals (Tassell-Matamua et al., 2021) but we are certain it will be the generation in Te Pōhā who will champion the restoration of these practices.

Te Pōhā is a wānanga space to practise mahinga kai. The tireless efforts of those who have retained kōrero and an understanding of contemporary environments have helped to instil in rangatahi the competencies to feed their hāpori while nourishing the taiao. In food storage and transportation tradition, the pōhā was an essential technology for a range of purposes throughout Te Waipounamu (Barber & Higham, 2021) and continues to be the perfect analogy for our kaupapa. As well as marking the seasons with specific harvests and the manufacturing of pōhā for storage, the pōhā embodies mana and is a significant tool for maintaining mahinga kai practice for our future kaitiaki.

The road to formalising the kaupapa and seeking funding can start a cycle of questioning your legitimacy, whether it is an important kaupapa, or even whether it is worth pursuing. To which we reply and reaffirm: when was feeding your iwi, preserving your landscapes, and knowing your tūpuna an illegitimate practice? There is a pōhā in every hāpori and kaitiaki ready to fill, to pass down to their next rangatira.



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GLOSSARY

Atua	Deity
Hapori	Community
Hīnaki	Net for eeling
Kaitiaki	Guardian/custodian
Karakia	Incantation
Kaumātua	Elder
Kaupapa	Programme
Kōnae	Small flax basket
Kōrero	Discussion
Mahi	Work
Mahinga kai	Gathering food
Manaaki	To care and nurture
Māra	Garden
Noa	Mundane
Pōhā	Vessel made from rimurapa
Pūrākau	Story/narrative
Pūtea	Financial assistance
Rangatahi	Adolescent/youth
Taiao	The natural environment
Taonga	Treasure
Tapu	Set apart
Tauira	Student
Tikanga	Customs/protocols
Takiwā	Area of practice
Tūtohu whenua	Landmarks
Waiata	Song
Waitaki	Area of Te Pōhā’s operation
Waka	Canoe/ship
Wānanga	Space of learning
Whakatau/pōhiri	Ritual of welcome

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A Tīwaiwaka Approach to Oranga

Ka ora te whenua, ka ora te tangata

Kaewa Savage*



Figure 1 Whānau wānanga, 2025

Abstract

Tiwaitwaka is a way forward, reconnecting an Indigenous understanding of oranga through connection to the mauri of te taiao. This article shares a whānau journey through my master's thesis, utilising a memorandum of understanding (MOU) written by my late Pāpā and the Tiwaitwaka principles nā Pā Ropata. The influence of both my Pāpā and Pā Ropata in this kaupapa and its success is a reflection of them, their teachings, and aroha. They both shared a vision of ensuring that future generations are connected to their whenua, know who they are, and where they come from.

Wānanga was used as a method of understanding, a whānau approach to implementing our whānau MOU through using the Tiwaitwaka principles as a waka to achieve reconnection and restoration of our papakāinga. Kotahitanga was a key theme of our whānau approach to this kaupapa, through supporting one another and using our differences as the gifts we bring. Listening to the whenua and what it needs is the foundation we work from. Importantly, this article demonstrates a Tiwaitwaka approach to achieving oranga for the whenua through a whānau-led kaupapa.

Keywords

Taiao, environment health, indigenous knowledge, human health, Tiwaitwaka principles, Kotahitanga.

* Ngāti Awa, Ngāti Rangitihi, Tūwharetoa ki Kawerau, Te Whānau a Apanui, Ngāi Tahu.

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Introduction

Ko Pūtauaki te maunga e tū mai nei, kia rere ana te awa o Rangitāiki i te taha o tō mātou papakāinga, ko te mauri o te whānau nō Ngāti Awa kei reira ra.

This research shares the journey of my master's thesis, completed in 2025 alongside my whānau. The vision of the research was to reconnect to our whenua for the oranga of our whenua and whānau. Through the research, wānanga was utilised to bring us together and share kōrero with one another, which influenced the findings of my thesis. One definition of wānanga stems from a traditional understanding, which is to discuss, deliberate, and exchange knowledge (O'Brien & Strongman, 2006). During the wānanga of this research, the Tiwaiwaka principles nā Pā Ropata (Rob McGowan) were implemented to demonstrate what they can look like in practice within a whānau-led kaupapa. Tiwaiwaka was born from the awa of Whanganui, from tangata whenua who taught Pā Ropata, bringing forth, through him, a message of hope and unity (McGowan, 2023). Pā Ropata, a rongoā Māori healer, practitioner, and mentor to many, has shared these principles in variations for a long time. The kaupapa of Tiwaiwaka is named after the manu known as the fantail bird. Much like the characteristics of the tiwaiwaka, the principles often draw people in to guide them back to their whenua and support others to strengthen their understandings of te taiao. The value of these principles holds steadfast to the way we, as tangata whenua, interact and view the world. The six Tiwaiwaka principles focus on caring for Papatūānuku firstly and putting her needs before our own (Tiwaiwaka, 2023). These principles were implemented in my master's thesis kaupapa over a series of wānanga at our whānau papakāinga where the research took place.

The principles come from a connected approach, in tune and aligned with the balance of te taiao. The most important message is to care for the whenua first, as she is our priority and everything else should be measured against her needs (McGowan, 2023). My Pāpā connected me with his friend Pā Ropata a few years ago to strengthen my learnings within te taiao from someone knowledgeable. When my Pāpā passed away in 2023, my connection to my identity and te taiao became a significant part of my healing and it is now my passion to ensure I can share the importance of my learnings with others. This article shares the experiences of my whānau through their journey of reconnection and how the Tiwaiwaka principles were integrated into the kaupapa.

Principle 1 – Te Whenua, Papatūānuku, is the source of all life. She is the mother. Ka ora te whenua, ka ora te tangata

The Tiwaiwaka principles have supported me to understand my relationship with te taiao more deeply. I am able to live a life with my whānau that is embedded in te taiao, exercising sustainable practice, and having a true sense of belonging. The principles speak to the importance of connection through a Papatūānuku-comes-first approach, rather than a people-centric approach. What this approach significantly aligns with is a te ao Māori understanding of oranga and ensuring that the mauri of te taiao is at the forefront of decision making. Understanding the health of the environment and its impact on the health of us, as people, has been an important journey for me. This journey has had immense value in supporting me to navigate my growth as a person, my placement as a young wāhine Māori researcher, and, most significantly, to this kaupapa, through navigating a world without my Pāpā's guidance ā tinana. When I lean into the tohu of te taiao, I am reminded of my tūpuna and the special place they hold ā wairua. The more I learn from te taiao, the clearer my understanding is of what it means to be tangata whenua.



Figure 2 Pa Ropata and Kaewa, 2022

In alignment with the Tīwaiwaka principles, supporting whānau, hapū, and iwi to restore their connection to te taiao through a place-based approach is what drives me. My Pāpā began instilling the importance of reconnection to our whenua and our whānau before his passing, and Pā Ropata has continued guiding me with these learnings. The kaupapa of this research stems from my master's thesis, *Whakapiki Tūhono ki te Whenua – Reconnecting Whānau to te Taiao for the Oranga of te Taiao and Our People*, a significant kaupapa for my whānau and me, as it derives from a kaupapa that my Pāpā began. Bringing my Pāpā's moemoeā to life alongside my whānau through the memorandum of understanding (MOU) he wrote is a taonga. The MOU outlined the tikanga, whānau values, aspirations, and necessary considerations that involved our whānau and our papakāinga. It was used as a blueprint to map out my master's thesis and to guide how we can enhance our whānau approach to caring for Papatūānuku, so this knowledge can be passed on.

Principle 2 – We are not the centre of the universe, but we are part of it

The success of this kaupapa with my whānau meant acknowledging that the focus is not to directly impact us now but rather to knowingly action these plans to impact future generations: a bigger purpose than us. This notion represents the intricate relationship of the universe and how we are not the centre of it, but rather a part of it. Connection to te taiao is fundamental to identity and belonging, a body of knowledge that is well known to Indigenous peoples around the world (Jessen et al., 2022). Affirming an Indigenous approach of belonging to the whenua, rather than ownership, is essential. Ownership seeks control; belonging embodies care (Whaanga, 2021). An Indigenous lens means having an understanding of the balance between all living things (Pomare et al., 2023). For Māori, this means embracing our role as the pōtiki, the last born and ensuring we care and nurture our tuakana, which are the trees, the birds, the fish, and te taiao in its entirety. Significantly, in Aotearoa, understanding te taiao not only connects us to traditional Māori knowledge systems, but it also enhances the understanding of our place and purpose within these relationships (Moewaka Barnes et al., 2019). In order to build our understanding of the different connections, we must uphold the mauri and the mana of te taiao, through exercising kaitiakitanga and uplifting a connected relationship (Timoti et al., 2017).

Over a series of wānanga with my whānau, and with the support of Pā Ropata, Tīwaiwaka was introduced and implemented. The kaupapa began with a kōrero by Pā Ropata, who shared uplifting and encouraging words to inspire our whānau. Part of his kōrero centred on our responsibility as kaitiaki of our whenua, and he encouraged us to consider what kind of tūpuna we want to be for our future generations. The importance of this is to ensure that our mokopuna have an environment that can continue to sustain and support them to thrive through kai, rongoā, and a place of belonging. Our whānau wānanga captured what it is that we are aiming to achieve on our whenua and what it means to us. It was evident that by implementing our aspirations on our whenua, we would gain more than just physical outcomes. The added benefit would be that our tamariki and mokopuna would have a place to come home to, they would know where they come from, and could take part in collective decision-making conversations. As mentioned above, our whānau values and tikanga were written by my Pāpā in the MOU he left us, guiding us to a collective approach, while upholding our responsibility to our whenua, to one another, and to our future uri. The kōrero shared during our whānau wānanga rekindled whakaaro and ideas that had taken root long ago, seeds first planted by my Pāpā that are being nurtured by us today.

Principle 3 – The mauri is the web of connections that sustains life

The mauri of our whenua is enriched when we are there, connecting with one another and the whenua through plantings, wānanga, and energy exchange. Mauri is the energy that runs through us and binds us (Hikuroa et al., 2011). The trajectory of my pathway has been divinely paved, and each learning has connected to another, building resilience and leading to my introduction to understanding the web of connections. My Pāpā was the strong pou of our whānau, who organised and brought us together often and was the key driver to getting things done. We only realised once he passed how much we relied on him, his wisdom, direction, and guidance. Without his physical presence, the hole he left behind was evident. We as a whānau had to come together to continue his legacy and dreams for our whenua and whānau. When I come home to our papakāinga, I get to look around at the trees my Pāpā planted, I get to connect to the whenua he grew up on, I feel his wairua all around me alongside my tūpuna and I feel at peace. This is something I have only realised the importance of having since his passing, and it's something I know he wanted our future generations to connect in with and feel collectively.



Figure 3 Whānau wānanga, 2025



Figure 4 Whānau wānanga, 2025

Regular wānanga are a chance for us to check in with one another, stir up the mauri within, and leave parts of it ingrained in our whenua. As a younger member of our whānau, stepping into a leadership role brought forth both challenge and growth. Through the series of whānau wānanga, I realised that this kaupapa cannot rest on one set of shoulders. It is dependent on the collective mauri and the gifts each whānau member brings, whether it's aunties organising and cooking the kai to sustain our energy; my uncles and cousins preparing the whenua for our plantings; or our tamariki with their hands in the soil, pulling out the weeds and laughing together. Whānau wānanga are an opportunity for us to look within ourselves at the value we bring and how it intertwines in the web of connections. This kaupapa is intergenerational and will strengthen if we can implement the importance of valuing one another and what each of us can do to support the kaupapa. Sharing more kōrero, reflections, and learnings along this journey is important, so that our whānau can see where we started to make it clearer and refine where we are going. What this means is acknowledging the impact that this kaupapa has already had; if we can maintain this momentum, imagine how much more we can achieve together.

Principle 4 – Te tangata, people, are not the masters of the mauri; we are part of the mauri and embraced by it

The MOU was able to anchor us from the beginning of this kaupapa through the foundations of our whānau vision. Part of the MOU specifically highlighted that we must “*establish a landscaped area as a rongoā space to provide a place of mental and physical respite, re-energise our mauri and wairua and provide an environment to get inspired.*” What is significant about this MOU aspiration is how it emphasises the impacts of creating a rongoā space that can be utilised for both revitalising our whenua and positively impacting our whānau ora. Our relationship with mauri is something that is ingrained within us and is central to our health and wellness. Traditionally, mauri is viewed through a network of all living organisms, not through the impact of individual species (Tīwaiwaka, 2023). It is part of our belief system as Māori that everything is connected, and for our whenua and whānau to thrive, this connection must be strong.

When our connection to te taiao is stronger, through spending more time within it and contributing to its health, we enhance our understanding and embrace its mauri. Through our whānau kaupapa, we were able to enhance our approach to engagement with te taiao while uplifting mauri by acknowledging the value of kotahitanga. Having a shared vision and plan for the future of our whenua motivated the kaupapa in relation to the theme of kotahitanga. Once we began to implement our vision through native plantings, revitalising our māra kai, fruit trees, and cleaning up our whenua, our whānau could see what we are capable of when we collectively put our minds and energy together. My master's thesis was a waka we used to reignite this whānau kaupapa. Our mauri within our whenua strengthened and we recognised that maintaining balance in the universe means putting Papatūānuku and her needs before our own. Our tamariki are the future of our whānau; if we can continue to nurture them through aroha and mana, their understandings of their responsibility as the kaitiaki of this whenua will flow effortlessly.

Principle 5 – No individual person is more important than any other

Influencing our tamariki to leave the world better than they found it is crucial to this kaupapa, especially when we consider what they are inheriting in the current climate. What is most important is to nurture strong minds that are determined, informed, and guided by hope, compassion, and kindness. While these qualities may sometimes be seen as “soft” or secondary, leading with genuine intention and heart fosters balance, trust, and ease across diverse environments. I recognise that a feature of our whānau's kaupapa was the positive energy, everyone was in good spirits and “*positivity*” was highlighted throughout our wānanga. It felt good for our whānau to be doing good for our whenua, one another, and our future generations. At each wānanga, we reflected on the previous wānanga and the journey we had achieved so far. We then set objectives to ensure we remained on track toward our long-term goals. This process strengthened our sense of achievement and empowerment.

Instilling our whānau values in our tamariki and mokopuna is about ensuring that our whenua is thriving and that we as a whānau have a strong sense of belonging to it. Looking through the lens of this principle, draws on the kōrero of affirming our individual roles and the gifts we bring and utilising them towards a shared goal or aspiration.

Principle 6 – We give special care to the tiniest living creatures

This last principle emphasises the importance of every living organism and the role each plays within the web of life. When we care for the microorganisms in our environments, we are ultimately caring for ourselves and our future generations (Tīwaiwaka, 2023). The microorganisms within our bodies work collectively to keep us well; without them, imbalance and ill health can occur. By nurturing thriving environments that sustain healthy soils and food systems, we in turn sustain our own wellbeing. In Aotearoa, we are privileged to live closely within the many domains of te taiao, the awa, moana, and ngahere. Generations of cultural and customary practices have emerged through deep observation, connection, and learning within these spaces (Walker et al., 2019). Honouring these relationships, woven through our whakapapa as tangata whenua, is essential for our future generations to know who they are and where they come from.

The more I learn from and within te taiao, the more I recognise how deeply interconnected every living organism, moment, and experience truly is. I did not grow up with a fully traditional Māori upbringing, yet I was never completely disconnected from my culture; like many, I sit in between. Through this position, a yearning emerges. Each pūrākāu, kōrero, and wānanga I encounter continues to awaken and strengthen my mauri, deepening my understanding of belonging and responsibility. It is a journey I am grateful to be on, learning alongside my own whānau and our aspirations of connection to our whenua and whānau. Traditionally, the rhythm of all living things was attuned to ngā tohu o te taiao (environmental indicators or signs), shaping a Māori worldview (McGowan, 2020). The Tīwaiwaka principles seek to restore this ability to once again hear, feel, and respond to the tohu, reconnecting us to an Indigenous way of living in harmony with the natural world.

Conclusion

The knowledge of Tīwaiwaka arises from the whenua of Aotearoa and, like the manu itself, carries the intention to spread far and wide, making itself known to all who are willing to listen. These principles invite people to come together and work collectively towards a shared future guided by care for Papatūānuku first. If we can return to this way of being and thinking in our decision making, we will move closer to a truly sustainable way of life. Recognising our differences as sources of strength, rather than barriers to collective action, enables us to generate the critical mass required to address the climate crisis. Tīwaiwaka unites us through a shared vision, where diversity of thought and skill fosters innovation and uplifts everyone to contribute in meaningful ways.

Our whānau kaupapa of my master's thesis was a way of honouring my Pāpā, and his enduring influence, by continuing the collective movement he established. I am grateful for his continued guidance and influence nō te ao wairua (from the spiritual realm). We will carry his legacy and ensure our future generations continue to lead this kaupapa through kotahitanga and kaitiakitanga for our whenua while upholding the mana of our whānau.

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Figure 5 Dad, uncles and aunty decades ago pulling up a hangi – memories we want to continue to have at our papakāinga.

GLOSSARY

Awa	River
Ā tinana	In person/physically
Ā wairua	In spirit
Kai	Food
Kaitiakitanga	Guardianship
Kaupapa	Topic
Kotahitanga	Unity/togetherness
Kōrero	Conversation
Mana	Authority
Mauri	Life force
Moana	Ocean
Māra kai	Gardening
Ngahere	Forest
Oranga	Thriving/living
Papakāinga	Homestead
Pāpā	Dad
Pūrakau	Narrative/story
Rongoā Māori	Ways of healing
Tangata	People
Tangata whenua	People of the land
Tikanga	Practices/customs
Tohu	Sign
Tūpuna	Ancestor
Wairua	Spirit
Waka	Canoe
Whakapapa	Genealogy
Whenua	Land/placenta
Whānau	Family
Wānanga	Places of learning

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