

National **SCIENCE** Challenges

**BUILDING BETTER
HOMES, TOWNS
AND CITIES**

Ko ngā wā kāinga hei
whakamāhorahora

Exploring Papakāinga: A Kaupapa Māori quantitative methodology

**Kāinga Tahī, Kāinga Rua, project 8 – Papakainga Whenu 3
Dr Ella Henry and Professor Charles Crothers**

National Science Challenge: Building better homes, towns and cities

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Introduction

This study is part of a wider Kāinga Tahī, Kāinga Rua¹ Kaupapa Māori² research, within the National Science Challenge: Building better homes, towns and cities, which are part of a larger government funded strategy for New Zealand science and research. This paper offers a strategy for gathering and analysing large-scale data, that will contribute to an understanding of how Māori might better fulfil aspirations for the designing, financing and building housing, as well as their perceptions of housing and papakāinga, and the contribution to Māori wellbeing. The final outcome of this study will be the design of an Indigenous Māori quantitative methodology to seek, gather, make sense of, and disseminate this information, within an overarching Kaupapa Māori ontology, epistemology and axiology.

Quantitative Research

Quantitative research, by, with and for Indigenous peoples is a contested domain (Chillisa, 2011; Smith, 1999). Walter and Anderson provide the definitive discussion on Indigenous quantitative research. They state that, “For Indigenous peoples, especially in first world countries where population statistics powerfully influence government and social services, these numbers have become a foundational lens through which we, as Indigenous peoples, become known to our respective nation states and how we engage in many of our relationships with government sectors” (2013, p. 7). They argue that quantitative research and data may be developed and utilised to empower, rather than merely define, Indigenous peoples, if it is underpinned by a cultural framework that ensures the resulting data does not contribute further to pejorative and judgemental perceptions of Indigenous realities and experiences. Further, they invoke Indigenous quantitative researchers to develop methodologies that are culturally grounded and appropriate. This involves methods around how, why, when and where data is gathered, and how that data is interpreted. They exhort Indigenous quantitative researchers to acknowledge and understand the ways that academic research is situated, noting that, “qualitative methodologies tend to focus on small or localised objectives, and to examine them more deeply” (2013, p. 10). However, quantitative research, “abstracts, and allow researchers to draw from local context, standardize it... and deliver it to a central point of calculation”, which may “miss complexities, and downplay the importance of ‘place’ that is so important to many Indigenous peoples (2013, p. 11). Walter and Anderson conclude that, “Indigenous quantitative research is in essence quantitative research framed and developed from an indigenous, socially positioned epistemological, ontological, and axiological perspective... approaching quantitative research from an Indigenous frame is a methodological process that acknowledges our... presence in contemporary global society, and does not assume that a movement toward modernity is a move away from Indigeneity” (2013, p. 17). This paper, and the resulting study, will build on these foundations and contribute to the founding Indigenous quantitative research literature.

Literature Review

Makereti, renowned Māori scholar, noted that, “The word kāinga means literally village, but to the Māori it means home, and that is the English word that best describes it for me’ (2008, p.35). She went on to describe how kāinga could be occupied by a hapū, made up of several whānau

¹ Kāinga tahī, kāing rua mean, first/traditional/tribal settlement, and second/urban settlement

² Kaupapa Māori, the Māori way, is discussed in more detail in the paper

(family groups). Archaeological evidence from as early as the 14th-century shows Māori living in villages near to their food sources, in rectangular dwellings similar to those throughout Polynesia, and moving between seasonal settlements. According to Schrader (2013), in 1769 James Cook observed Māori communities living in fortified settlement (Pā), with up to 500 dwellings, but most lived in hapū or whānau-based communities, comprising a pātaka (food storehouse), kāuta (cooking house), sometime a wharenuī (meeting house), and wharepuni (sleeping houses). Māori traditionally built kāinga on high land, choosing places near springs or rivers, ensuring the site provided a healthy environment. A whānau might also inhabit more than kāinga, and would move between them. This mobility was not understood by many European observers, and was the pattern of transience (which Pākehā observers took to be abandonment), as families moved to best exploit resources. Despite this traditional approach to housing and construction, Lange (1999, p.22) reports that ‘Māori housing practises were continually criticised by Pākehā observers, whose most common claim was that dwellings were overcrowded and badly ventilated’.

From the 1930s onwards there have been a series of reports on Maori housing, usually in a rural setting. Most of these studies have been limited some entirely statistical (Wanhalla, 2006). Moreover, some notable studies have been silent on housing, whereas others have clearly articulated a Maori understanding of housing. The Māori Women’s Welfare League conducted the first survey of Māori housing in Auckland in the early 1950s. The League found 551 households required re-housing, with 368 classed as urgent, and 32 family units living in condemned houses. Most participants had not previously applied for state/social housing because of their concerns about living in European/Pākehā communities (Te Ao Hou, 1952, pp. 53-54). The impact of the survey led the Auckland City Council, and the Department of Māori Affairs and Housing, to increase the building of state housing for Māori. At the same time, Māori were restricted from building on their own land through the 1953 Town and Country Planning Act.

By the mid-1980s there were several reports on Māori housing (Bathgate, 1988; Douglas, 1986; Moteane, Matjato, the Papakāinga Housing Research Group, 1985). Douglas (1986) provides a detailed canvas of policy issues and reports, and the difficulties for Māori housing (e.g. in Waiapu District), from a Māori perspective. The Royal Commission on Social Policy (1987) developed a survey, conducted by Statistics NZ, that offered a comprehensive insight into Māori views on circumstances and attitudes, including housing, as the social and economic impacts of what became known as ‘Rogernomics’ (Easton, 1989) began to be felt. From the 1990s, several studies were produced. For example the Māori Women’s Housing Research Project (1991), produced accounts of Māori views on the notion of home, drawing attention to the many functional meanings of home and house for Māori. The study was particularly effective, no doubt due in part to the collaboration between numerous government agencies, and the use of Māori researchers from the communities being studied in South Auckland, Gisborne, and Christchurch, followed by a national consultation process involving many Māori women in a series of hui. This study reinforced previous ones focusing on Māori disadvantage, and the role of the state in not overcoming these issues. Vivid documentation of substandard housing are provided, and their effects on residents’ wellbeing. Murphy & Cloher (1996) examined the extent to which economic change has affected the marginalized status of Māori households in the predominantly rural region of Northland. The social implications of economic restructuring were assessed by focusing on housing circumstances. Using a newly developed Māori housing database, they argue that relatively progressive housing policies, developed in the 1980s, failed to address the housing problems of Māori, and that the recent reliance on ‘market’ mechanisms to meet housing needs is likely to exacerbate problems of housing access and cost. Howden-Chapman et al (1996) looked at the relationship between housing and health, and found “evidence on the key aspects of poor housing such as inadequate maintenance, over-crowding, low temperatures and dampness, that have been identified as contributing to the impact of housing on health” (p.173), which they argue is despite housing initiatives to promote public health, without a clear understanding of causative factors. Government inaction has demonstrably impacted on deficits in Māori housing. Waldegrave et al (2000) drew on 1996

research, to determine how urban Māori state tenants were faring under state housing 'reforms', assessing the effectiveness of the new income-related ways of delivering housing assistance, and again finding deficiencies.

Research activity over the early 2000 period moved from a focus on deficit, known then as 'Closing the Gaps', to affirmative, exploring 'Whānau Wellbeing'. In 1998, Te Puni Kōkiri produced the first Closing the Gaps report, recording significant gaps in social outcomes between Māori and non-Māori. Waldegrave et al (2006) produced a thorough study of Māori housing experiences. They found that Māori aspirations for home-ownership differed little from those held by Pākehā. Barriers to achieving home ownership include: high and rising housing costs and the difficulty of obtaining finance; lack of knowledge about homeownership; difficulty of accessing services and information; low motivation; discrimination; high bureaucratic costs in both urban and rural environments; and high development costs especially in rural areas. Stats NZ (2007) is a large-scale survey of 'Motivations for Moving'. For Māori, social reasons were the main motivation (29.4 percent) for moving from their previous residence, closely followed by economic (27.5 percent), and housing reasons (19.5 percent). For Europeans, economic reasons (32.8 percent) was the main motivator for moving, followed by social reasons, (22 percent) and housing reasons (16.6 percent).

Statistical studies continued into the 2010s, and more recent work is more detailed, dealing with a range of complexities, in particular, the Statistics NZ studies' of housing tenure over time. This approach has culminated in the GSS (Stats NZ, 2018) module on housing. A major difficulty is, that while dwelling occupancy is a useful social household activity, it is problematic when probing for ethnic differentiation, as some statisticians argue that households don't embody ethnic identities. A widely used approach is to count a household as Maori, as long as at least one member of the household defines themselves as Maori. Another difficulty is that the concept of whānau points to strong links amongst Maori households, which are currently difficult to measure. Many Maori inter-marry (or inter-partner) with people with people of other ethnic identities, and it is likely that the ethnic mixes of their children will be even more complex, when developing studies (Kukutai, 2007). There is little information on how this increasing complexity works out 'on the ground' in households, and in affecting housing aspirations. According to existing data, Māori households are more likely to be multi-generational and multi-family. Although the concept of a family lifecycle (or perhaps an extension to a whānau life cycle), and family asset-cycle, is central in understanding the demands for services, there is little information on these, let alone how Maori families fare in different family circumstances or regions. What is known from the literature is that Maori are more likely to have:

- a lower proportion than the general population who are in stable partnership relationships, perhaps because of the youthful age-structure;
- a lower proportion of childless families, but a higher proportion of single-parent families;
- households that are larger.

Complexity of whānau definitions has also been studied. Boulton & Gifford (2014) the concept of whānau ora (family wellbeing). Maori were asked to define whānau ora for their family, which led to a set of 46 whanau definitions that were analysed for their concordance with Whānau Ora, as defined by the Report of the Taskforce on Whānau-Centred Initiatives The authors discuss the variability in understandings around whānau ora, and the implications for social service delivery and social policy development. The spatial patterns of where Maori live, can affect the method of studying them as well as their housing aspirations. Ryks et al (2016) have analysed the distinctions between urban Māori, as:

- Mana Whenua: iwi and hapū who hold traditional mana over the land in which they reside;
- Mātāwaka: those who do not hold traditional mana, and whakapapa, or genealogical links to the land on which they live.

These latter may also be referred to as:

- Taura Here: those who retain a link with iwi and hapū outside the area in which they reside;
- Taunga Hou: referring to “those people who are of Māori descent and Māori ethnicity but who, through choice or circumstance, do not link back to their own iwi/hapū” (Ryks et al., 2016, p.31).

In the 2013 Census the proportions of Mana Whenua and Mātāwaka varied greatly across the main cities and centres. In Auckland and Wellington, in particular, Taura Here greatly outnumber Mana Whenua whereas in Hamilton, Christchurch, Rotorua, and Gisborne, the Mana Whenua comprise members affiliated to the iwi of that area, living within in their traditional homelands. From time to time, there have been studies of housing preferences (Allen, 2015; Howden-Chapman, 2015). The various studies noted here are helpful in pointing to elements which might to be covered in a study focusing on aspirations and preferences study. For example, seeking Māori preferences for future households, around whom the respondent expects, or hopes to live with in an ideal kāinga (in this context, both village and home).

The Budget, due to be handed down by government in May 2019, is for the first time focusing on wellbeing. As stated by government, they are “committed to putting people's wellbeing and the environment at the heart of its policies, including reporting against a wider set of wellbeing indicators in future Budgets... Budget 2019: The Wellbeing Budget, will broaden the Budget's focus beyond economic and fiscal policy by using the Treasury's Living Standards Framework to inform the Government's investment priorities and funding decisions” (Budget 2018). The government will measure through four lenses:

- Human capital
- Social capital
- Natural capital
- Financial and physical capital

Incorporated in Budget planning is a priority that commits government to lifting Māori incomes, skills and opportunities. One might assume then, that a study of this nature will provide invaluable information, gleaned through a Māori-centric, cultural methodology, to elicit Māori aspirations, that should inform future tribal and governmental decision-making.

Sociology of Māori & Housing

When New Zealand was colonised, though signing the Treaty of Waitangi in 1840, the country was formally annexed by the British. Since then, Māori have gone from owning all their lands, the foundations of economic and social well-being, to being marginalised in contemporary society. Māori are over-represented amongst the most disadvantaged social statistics. The loss of land, through the military and political actions of successive New Zealand governments are well recorded (Orange, 2015; Stokes, 1992; Walker, 1990), and the consequences continue to impact on Māori society (Henry, 2012), not least in terms of housing.

For rural Māori, housing was sometimes poorly constructed and maintained, with consequent health risks, consisting of small clusters of houses around a Marae, which was usually located in a rural area, or on the margins of urban areas. There was a fluidity of membership amongst dwellers in these houses, and they were often linked to the local environment through gardens and the gathering of traditional Māori foods in adjacent areas. However, the shift of a significant proportion of Maori population to urban areas, in the post World War II era, has exacerbated Maori housing problems. Aspirations are no longer as easily established. Studies have shown that there is often an interest in the design of housing which allows fluidity of movement and sufficient capacity to also accommodate the wider whānau. Maintaining links between Marae and urban Māori can be expensive, especially when considerable distances are involved. There has been a prolific growth in urban Marae, particularly associated with churches, schools, tertiary institutes, and social service

providers, and these fill a vital role for many Māori (Henry, 2015). Moreover, the Maori population has differentiated, with the rise of a Māori middle class, as evidenced in income by Iwi in recent Census data. This may have led to different views of household formation, and subsequent needs and aspirations.

There is clearly an increasing interest in, and demand for papakāinga, and Marae-based housing (Palmer, 2017; Kepa et al, 2015), amongst these, those retiring Maori who seek to reconnect with their 'tribal roots', and Iwi living in or near urban areas, e.g. Ngāti Pūkenga in the Bay of Plenty, Ngāi Tahu in Christchurch, and Ngāti Whātua in Auckland. For younger Māori the same level of interest in returning to the tribal homelands may be hampered by difficulties of securing employment, and access to higher education. The interest in Marae-based housing may also be mediated by household structure, and likely future patterns of whānau formation, e.g. 'baby-boomers' aging and requiring more care, smaller families. Future research will need to consider design features and facilities. In sum, Māori housing aspirations are likely more varied than some years ago and so the parameters need to be established, since little is systematically known about those aspirations. Further information is also required about the 'supply side', for example, access to, and use of Māori-owned and urban land, capacity around existing Marae, the legal and financial requirements, as well as financial assistance. Programmes such as Kiwi Build, an ambitious, government initiative to build 100,000 new houses, to ameliorate New Zealand's housing shortage, and make available 'affordable housing' has been beset by problems from the outset. However, increasingly tribes are focusing on building issues, and at the gathering of the Iwi Chairs Forum at Waitangi in January 2019, a commitment was made to build 250 houses, with appropriate support from government.

In summary, there has been a steady stream of housing studies, stretching back over the last century, which incorporate Māori data. A few, primarily qualitative, have probed more deeply into Māori experience, and most recently, looking at papakāinga. Taken together, these studies are further evidence that data about Māori and housing tends to highlight the negative. In recent years, research for, with and by Māori have yielded findings that focus on Māori values, and aspirations. However, on the basis of the majority of these studies, we might conclude that Māori dwell in a perpetual state of disadvantage. This literature review has yielded few relevant, and up-to-date studies of Maori housing aspirations, although secondary analysis of existing data-sets, and consequent reports have provided information that can inform the construction of a new study of this nature.

A Māori Indigenous Quantitative Methodology

This paper offers a model for an Indigenous Quantitative Methodology, grounded in Kaupapa Māori. Incorporating the principles that reflect the ontology, epistemology and axiology of the researchers and participants, requires an understanding of the Kaupapa Māori Research paradigm, which is embedded in Māori history and culture. The literature and survey of existing data and databases suggests that there is a place for such a methodology and study. This is particularly given the impetus by Māori scholars for research that recognises and acknowledges Māori knowledge systems (mātauranga Māori), and the long history of colonial expropriation and diminution of Māori knowledge.

Māori have consistently called for the recognition that their sovereignty was not relinquished upon signing the Treaty of Waitangi in 1840, and their consequent right to self-determination has been undermined by the colonial experience. In the late 20th Century, growing discontent from Māori resulted in activism and protest, which heralded what Walker (1990) has termed the Māori Renaissance, underpinning the cultural and linguistic revival of Māori since the 1970s. Alongside this, there emerged an indigenous approach to knowledge creation termed Kaupapa Māori (Smith, 2003), about which it has been stated that its "meanings are embedded in Māori culture. It literally means the Māori way or agenda... encapsulated in a Māori world-view or cosmology" (Henry and Pene,

2001, p.236). They argue that Kaupapa Māori is both a set of philosophical beliefs, and social practices (tikanga), which, in combination, emphasise the connection between mind, body and spirit. Taken together, these ethics inform traditional Māori ontology, and assumptions about human nature (Henare, 2001). Thus, traditional Māori ethics and philosophy also drive Māori epistemology.

The contemporary use of kaupapa Māori continues to be imbued with these values and beliefs... Over the past two decades the Māori Renaissance, has engendered an environment in which Māori intellectuals have begun to challenge Western models of knowing and knowledge-construction

(Henry and Pene, 2001:242)

On this view, Kaupapa Maori incorporates philosophical beliefs and social practices, such as whanaungatanga (kinship), kotahitanga (interdependence), wairuatanga (spiritual connection), kaitiakitanga (stewardship), and manaakitanga (generosity), amongst others. “Taken together, these ethics inform traditional Maori ontology and assumptions about human nature.. Traditional Maori ethics and philosophy also drive Maori epistemology. That is, to live according to tikanga Maori” (Henry, and Pene, p. 237). Thus, kaupapa Maori methodology is the methods and procedures that are shaped by assumptions of ‘what is ‘real’ and ‘what is true’, “which in turn shapes our perceptions of what is ‘science’ and how we do it” (op. cit, p. 237).

Kaupapa Māori research has evolved as a growing body of literature since the 1980s, in the face of the dominant Eurocentric knowledge-systems (Cram, 1993; Smith, 1997; Sueffert, 1997). A growing body of studies have developed the ontology, epistemology and methodology of Kaupapa Māori Research (Bishop, 2005; Henry & Pene, 2001), and a set of research methods and procedures, underpinned by Māori ethical principles and values (Smith, 1999). Therefore, the methodology and methods adopted for this study are a “reflection of the researcher’s values and beliefs about truth, reality and existence, and the consequent knowledge that can or should be gleaned” (Henry & Foley, 2018, p.213).

It is the authors’ contention that a large-scale, quantitative study of Māori perceptions and aspiration can, and in fact should, be informed by both Tikanga Māori and Kaupapa Māori (Henry, 2012). Therefore we draw these together, and apply both to the further development of a research project initiated for, with and by Māori. We begin with an exploration of the axiology, the values and ethics that will inform the research. Killiam defines axiology thus, “In research, axiology refers to what the researcher believes is valuable and ethical” (2013, p. 6). To do this, we draw on the work of Smith (1999), and the model of Kaupapa Māori Research Ethics that she has proposed.

The core values within Kaupapa Māori framework provide an axiological foundation, a code of conduct, for research, which Smith has articulated as:

<i>Āroha ki te tangata</i>	Showing compassion to participants
<i>Kanohi kitea</i>	Being seen in person
<i>Titiro, whakarongo, kōrero</i>	Looking, listening, speaking with care
<i>Manaaki ki te tangata</i>	Giving hospitality to participants
<i>Kia tūpato</i>	Being cautious and careful
<i>Kaua e takahia te mana o te tangata</i>	Not trampling on the mana of participants
<i>Kaua e māhaki</i>	Not being offensive

Table 1: Kaupapa Māori Ethics, L. Smith, 1999, p. 13

Whilst some Kaupapa Māori researchers are adamant that only Māori can participate, others encourage outsiders to engage with Māori through working to understand the ‘other’ and develop “an inter-cultural discourse” (Ritchie, 1992: 109). One approach advocates that non-indigenous researchers are educated before, and as they carry out research, for example, by being mentored,

learning the language, and through immersion in cultural protocols (Smith, 1999). Working on Kaupapa Māori research projects with Māori and non-Māori researchers, Henry and Pene found that,

These researchers reflect the kaupapa Māori ontology, with its emphasis on connection, interdependence, spirituality and guardianship. Their ethnicity, their Māoritanga or 'Māoriness', is not as significant as their identification with the kaupapa, the objectives and processes of the research, and the ways that they enact and practice research as a set of ethics and values as well as methodological practices (2001:240).

At the core of Kaupapa Māori is the standpoint that 'to be Māori' is not a deficit, and affirming the importance of Māori holds the potential to leverage social and power and develop interventions for social transformation.

Another issue of relevance for quantitative research is that of data sovereignty, which is seen by Indigenous peoples and activists as critical issue when gathering data on their populations. The decolonization of data is seen by activists as a way to give power to indigenous people, as a means to determine who and how they should be counted, in ways that better reflect the interests, values and priorities of Indigenous populations. Given power over their own data, Indigenous peoples would be able to decide which data is gathered and disseminated, a decision typically made by government agencies. Te Mana Raraunga, the Māori Data Sovereignty Network, has created a Charter, which recognises data has strategic value for Māori. They propose the following purposes for Māori data sovereignty:

1. asserting Māori rights and interests in relation to data,
2. ensuring data for and about Māori can be safeguarded and protected,
3. requiring the quality and integrity of Maori data and its collection,
4. advocating for Māori involvement in the governance of data repositories,
5. supporting the development of Māori data infrastructure and security systems,
6. supporting the development of sustainable Māori digital businesses and innovations.

(Te Mana Raraunga, n.d.)

Taking into consideration these foundations of methodology, the ontology, epistemology and axiology of the Kaupapa Māori paradigm, and with regard to data sovereignty concerns, the following section articulates the research design, as follows.

A Kaupapa Māori Quantitative Research Model: Te Tatauranga Auaha

This model draws on Māori language and knowledge. Te tatauranga is translated as statistics, and auaha as creative and innovative. Thus, Te Tatauranga Auaha is glossed as a new form of statistical research. The development of the survey will comprise the following stages, which will be addressed individually below.

1. Bringing together research partners
2. Designing topics and questions
3. Distributing the survey
4. Analysing the data
5. Disseminating findings

Bringing together research partners: Mahi Tahī

Whilst the bulk of funding for research about Māori is through governmental channels, a research partnership for this study must be founded on notions of Māori self-determination.

Therefore, bringing together research partners, must be driven, in the first instance, by Māori, despite funding imperatives from government, tertiary or crown research entities. Mahi Tahī literally translates a working together. Therefore, a collaborative approach would be applied to bring together relevant parties from the outset, including scholars (Māori and non-Māori), Iwi, taura here, and community organisations. This process was exercised in the development of the National Science Challenges, where researcher and stakeholder engagement occurred for two years before final proposals were submitted. The difference is that these gatherings would be initiated by Māori. Tribal representation could be facilitated through representation from the Iwi Chairs Forum, and Taura Here representation through Mātā Waka and urban Maori entities. For a study of Māori housing, community organisation like Ngā Aho: Māori in design and Matapihi, the Maori housing group, as well as national pan-tribal bodies like Māori Women's Welfare League, and Te Mana Raraunga would be invited to participate.

Gatherings would be conducted along traditional Māori lines, including Hui and Wānanga, which has been referred to as a Māori College, and a system of higher teaching and learning of cosmology and history in traditional society (Whatahoro, 2011), and described as a research technique (Lee, 2009, Eruera, 2010), which Elder defines as "culture-specific fora in traditional meeting houses" (2013, p. 406). The major outcome of these gatherings would be the formulation of a collaborative agreement that articulated the relationships and accountabilities, goals and strategies, and governance and management of the research.

Designing topics and questions: Uiui³

Kaupapa Māori Principles (Henry & Foley, 2018, p.217) would be applied in the development of research questions and topics:

- Research for, with and by Māori people (unless Māori decide otherwise): This study will be led by Māori researchers, but will include a non-Māori with expertise in the field, who share a commitment to the kaupapa of the research.
- Research that validates Māori language and culture: Where possible, Te Reo Māori will be used, in communications, and as a survey option. Tikanga Māori will inform all aspects of the survey design, that is, hui and wānanga will be held with partners to the collaborative agreement, and other relevant groups and individuals to explore and decide upon topics and questions.
- Research that empowers Māori people and delivers positive outcomes: Surveying Māori aspirations will require questions that are empowering. That is, the questions will be tested extensively across sample groups, prior to distribution, to ensure that they gather the appropriate information, but also are meaningful, that they elicit responses in a way that does not disadvantage or disempower participants, regardless of their level of literacy, or language skills, in Te Reo or English.

Distributing the survey: Tuari⁴

Distribution of the survey will include a wide range of specific techniques, to complement the potential weaknesses of each method.

- Mail-out to a recognised database, e.g. the Māori Electoral Roll, comprising approximately 250,000 aged over 18. Whilst this is a large database, it misses those Māori on the General Roll, and is problematic because changes of address between elections may mean a high level of returned or lost surveys;

³ To investigate, examine, from www.maoridictionary.co.nz

⁴ To share, distribute, present, from www.maoridictionary.co.nz

- Phone survey, using a commercial database, which allows for proportional representation of potential participants, across age-group and location. This method does miss those Māori who do not own a landline;
- Online survey, drawing on commercial databases, and social media snowballing. This method may be more useful for a younger demographic, and will not be relevant for those who do not have, or only limited access to the internet.
- In-person surveying. This method would involve collaboration with community organisations, and require training of community representatives, to deliver and collect the survey in the communities. This would allow a focus on specific areas, especially low-income, where other methods might not be as applicable. It also allows for capability building for community researchers. This was a particular successful tool used by the Tāmaki Regeneration Company to survey the population in Glen Innes preceding and after the urban regeneration project (TRC, 2016).
- Wānanga/focus groups with invited participants across a range of different demographic categories, e.g. single-parents, elders, social housing tenants, in a variety of geographic locations around the country.

Whilst this array of methods will ensure the widest range of responses, it is significantly more resource-intensive than any other survey method, except the national census, the responses for which are required by law, and therefore may generate antipathy.

The following table draws on Smith’s ethical framework, which provides an elegant model for addressing a wide range of and encompasses methodological issues that relate to more than just survey distribution. Each of these strategies emphasises an ethic of care that is encapsulated in the notion of manaakitanga⁵.

<p>Aroha ki te tangata: Show compassion to participants</p>	<p>Ensuring the survey is written, and spoken (through audio podcasts and videos) in a respectful fashion, and that the reasons for the survey are clearly articulated at the outset. Further, it is important that the questions reflect the values of Tikanga Māori. It is also important that potential participants recognise that this study fills a gap in our knowledge of Māori aspirations, and they are making an important contribution to that dearth of knowledge, and how that knowledge might be used for the betterment of Te Āo Māori.</p>
<p>Kanohi kitea: Be seen in person</p>	<p>Whilst it is impossible for a large-scale quantitative survey to fully achieve this principle. However, the ways that the survey is distributed, and information about it, can incorporate video and audio resources, so that potential participants can meet, and through social media website such as Twitter, Facebook and Instagram, interact with the researchers. This would be complemented by a series of Hui, in communities where local organisations, like</p>

⁵ Hospitality, generosity, respect, from www.maoridictionary.co.nz

	Marae and Rūnanga, are distributing the survey.
Titiro, whakarongo, korero: Look, listen, speak with care	The survey sampling process will involve a range of different groups of Māori, and their responses and feedback will be taken into consideration before the large-scale survey is finalised and distributed. It is important to ensure that the final survey reflects Māori needs, as well as eliciting Māori aspirations.
Manaaki ki te tangata: Give hospitality to participants	In a large-scale survey, it will be impossible to give hospitality to all participants. However, the methodology will include funding community researchers, and community organisations to conduct the study. Whilst it is an ethical requirement of new Zealand research, not to offer incentives to participate in research, there is also the potential to ask participants if there are any charities, or Māori organisations that they would contribute to if they could, and offer those organisations donations or support, on behalf of respondents.
Kia tūpato: Be cautious and mindful	At each point in the development and distribution of such a survey, consultation with appropriate academic and Kaupapa Māori experts will occur, to ensure that the survey is achieving its objectives, cultural and scholarly.
Kaua e takahia te mana o te tangata: Do not trample on the mana ⁶ of participants	The survey will provide a range of ways that potential participants might engage with, and complete the survey. This will involve offering the survey in Te Reo Māori; making it available in both written, and audio format (for those who might struggle with a written format); distributing it by mail, online, telephone, and through community groups who will be invited to participate (and funded to assist), such as Marae, MWWL, and sports clubs in communities with strong Māori populations.
Kaua e māhaki: Do not be offensive	Piloting the study with a range of sample populations, e.g. kaumātua (elders), rangatahi (youth), rural/tribal and urban Māori, will ensure its content, layout and processes are mana-enhancing, rather than difficult to access, understand, and contribute to, or see potential benefits from.

Table 1: Te Tatauranga Auaha Ethics in Practice

⁶ Status, authority, prestige, from www.maoridictionary.co.nz

Analysing the data: Tātari⁷

Tikanga Māori will inform all aspects of the design, distribution and analysis of the survey and its findings, including consultation with relevant experts during the data analysis phase, incorporating collective thematic analysis. This is a data analysis tool inspired by notions of hui and wānanga, where groups, including researchers, participants and others with expertise in the field of data and statistical analysis engage in collective and collaborative sense-making.

Disseminating findings: Pāho⁸

Like the data collection phase, this process will also be underpinned by Kaupapa Māori Principles, insofar as the usual scholarly outputs will be complimented by a suite of communications for the different types of audiences. These may include:

- Journal articles;
- Book chapters;
- Non-academic working papers, for dissemination of Hui and Wānanga around the country. This would include presentations to all stakeholder and community organisations that invite researchers to share the findings;
- Audio and video resources, including podcasts and vodcasts for online distribution;
- Social media, providing research summaries for platforms such as Facebook, Instagram, Reddit, Twitter, Pinterest, SnapChat, YouTube, Vimeo, Tumblr, Google+, LinkedIn, Academia.edu, and Research Gate.

Each of these methods has strengths and weaknesses as tools for communication. However, in combination, they provide the most exhaustive opportunities for connecting with Māori across the widest spectrum, and thereby, having potential influence on Iwi, policy-makers, social support agencies, and the plethora of entities that are charged with working with an for Māori, to strengthen and empower Māori people and Te Āo Māori.

Conclusion

A study of this kind will contribute new knowledge, and better understanding of Māori aspirations, in this case around housing, but there is potential for such a methodology to be applied to a range of issues, where the data collected will contribute to improved wellbeing for Māori. Further, as stated from the outset, the paper, and the resulting study, will contribute to the literature on Indigenous Quantitative Research, as a robust, reliable and reputable research technique for, with and by Indigenous people.

⁷ To sift, measure and analyse, from www.maoridictionary.co.nz

⁸ To broadcast, disseminate, from www.maoridictionary.co.nz

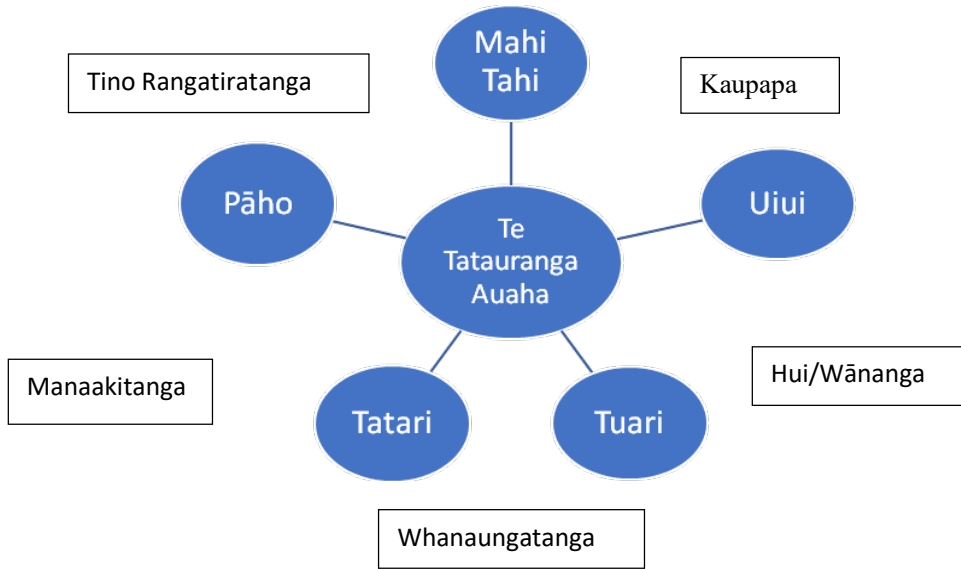


Figure 1: Te Tatauranga Auaha Quantitative Research Model

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