



Bridging cultural perspectives

FEBRUARY 2018



*Ko te manu e kai ana te miro, nōna te ngahere
Ko te manu e kai ana te mātauranga, nōna te ao*

*The bird that feeds from the miro berry belongs to the forest,
But the bird that partakes of knowledge belongs to the world*

Mihi and acknowledgments

He mihi tēnei ki a koutou katoa, na koutou i homai i o koutou whakaaro, i o koutou awhina hei whakakī i ā tātou kete mātauranga. Mei kore ake koutou hei tautoko, hei āwhina i a mātou ki te kohikohi i ngā kōrero mō tēnei pukapuka ki te tutuki pai. Tēna koutou, tēna koutou, tēna tātou katoa.

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Executive summary

Superu, and its previous entity the Families Commission, has developed the Bridging Cultural Perspectives approach. This approach acknowledges and respects the value of all knowledge streams. It is in contrast to earlier social research methods which marginalised or suppressed non-Western cultural paradigms. The approach also provides spaces for dialogue between the knowledge streams.

Bridging Cultural Perspectives is made up of two models. One, He Awa Whiria – Braided Rivers, was developed by Angus Macfarlane as part of his work in the Advisory Group on Conduct Problems. The model is dynamic. It allows for different cultural knowledge systems to function separately or together, just as the streams of a braided river flow apart or together in their journey to the sea.

The other model, Negotiated Spaces, was developed by researchers in the Te Hau Mihi Ata project. It applies the traditional concept of wānanga to the modern context. The wānanga are designed to facilitate conversation between mātauranga Māori experts and Māori scientists.

The two models work together well – He Awa Whiria – Braided Rivers provides a conceptual model and Negotiated Spaces provides the dialogue space and the means of application.

The Bridging Cultural Perspectives approach is a new way of collaboration. It is not easy, because it requires researchers, policy makers, planners and decision-makers to go beyond their previous conceptual boundaries. But the potential rewards are great. New and different ways of thinking can lead to innovation and the creation of new knowledge. These in turn can drive socio-cultural, technical and economic progress.

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01

History and background

This document describes the journey of navigating terrain known as the He Awa Whiria – Braided Rivers model. We set out to improve our understanding of the model.





The concept of a 'braided river' was developed by Professor Angus Macfarlane (Macfarlane, 2009) to reaffirm the integrity of kaupapa Māori research when positioned alongside prevention science research. He proposed the model to reconcile prevention science and kaupapa Māori perspectives when he was a member of the Advisory Group on Conduct Problems (AGCP).

The Advisory Group (AGCP, Ministry of Social Development, 2011) then adopted the model as it provided a culturally responsive methodological approach to research and evaluation as well as policy and programme development.

In 2011 the Chief Science Advisor, Sir Peter Gluckman, released a comprehensive report on how Aotearoa New Zealand could improve the outcomes for young people as they transitioned from childhood into adulthood (Gluckman & Hayne, 2011). The report included a chapter comparing both prevention science and kaupapa Māori approaches. It described how the He Awa Whiria – Braided Rivers model has the potential to reconcile these approaches. The chapter also considers the training and type of workforce needed to achieve better use of 'systematic (Western Science; Kaupapa Māori) approaches to policy development, implementation and evaluation' (Fergusson, McNaughton, Hayne, & Cunningham, 2011). From 2012 onwards the Families Commission adopted the model in some of its research work.

The Families Commission Statement of Intent 2014–2018 (Superu, 2014a)¹ supported the use of the model. It states that a 'braided rivers' approach is applied as a means of measuring and monitoring family and whānau wellbeing. The model is also useful for researching issues that arise through the use of the conceptual frameworks which were developed for this work (Superu, 2014). In 2014, the Commission's Families and Whānau Status Report set out two conceptual frameworks for family and for whānau to measure, monitor and report on wellbeing.

The frameworks draw on two separate streams of knowledge about families and whānau that provide us with different information about what is valued and to what degree it is valued. For instance, te reo Māori (the indigenous language of Aotearoa New Zealand) is highly valued amongst whānau and can be described as an integral part of whānau wellbeing. The He Awa Whiria – Braided Rivers model assists in the drawing out of this information by enabling us to delve more intimately into whānau wellbeing using a te ao Māori lens.

As we began to work through the process of understanding the He Awa Whiria – Braided Rivers model better, we realised that we needed to find out how the streams could exchange knowledge. So we chose to include the Negotiated Spaces model as a dialogue tool. That was because it provides a process for respectful negotiated conversations as well as the relationships to be developed from a dialogue process. In addition, its principles resonate with those of He Awa Whiria – Braided Rivers. This means the models worked well together: the He Awa Whiria – Braided Rivers was the conceptual model and Negotiated Spaces provided the means of application.

¹ In 2014, the Families Commission became the Social Policy Evaluation and Research Unit, or Superu for short.

Section A

Implementing the He Awa Whiria approach
and drawing from the Negotiated Spaces model
to bridge cultural perspectives



02

Implementing a He Awa Whiria – Braided Rivers model

*Kotahi te kohao o te ngira e kuhuna ai te miro ma,
te miro pango, te miro whero*

*There is but one eye of a needle, through which the
white, black and red cotton are threaded*

Kīngi Potatau Te Wherowhero



2.1 Introduction

This section discusses and proposes a process and guidelines that can be used to implement the approach with integrity within social sector agencies. Our discussions with the He Awa Whiria – Braided Rivers Steering Group² (the Steering Group) revealed that the overarching goals of the project needed to be made explicit from the outset. It became clear that one objective was to build acceptance of diversity in the policy space by looking at knowledge systems. The aim was to shift thinking away from a ‘one stream’ paradigm, where a mainstream dominant knowledge is considered, along with mātauranga Māori knowledge, to a ‘two stream’ approach where both knowledge systems have equal status. This approach does not exclude other cultures or worldviews as it also provides a platform for them to be considered and included.

According to the Steering Group, in the braided river metaphor, both streams start at the same place and run beside each other in equal strength. They come together on the riverbed and then they move away from one another. Each stream spends more time apart than together. In the model, when they do converge, the space created is one of learning, not assimilating. This project aims to increase the integrity of both streams in order to represent wellbeing for all people.

The imagery used by Professor Macfarlane to capture the essence of the model was drawn from the landscape of Te Waipounamu (South Island) where braided rivers are common features of the whenua (land) and therefore a feature of the tāngata whenua (people of the land). For Ngāi Tahu, braided rivers not only form a fundamental part of their cultural identity. They are also an expression of ūkaipō (sense of place)³ (Landcare Research). The physical characteristics of braided rivers are that they are made up of a complex system of shingle and gravel channels that are constantly shifting. (Environment Canterbury, 2016).

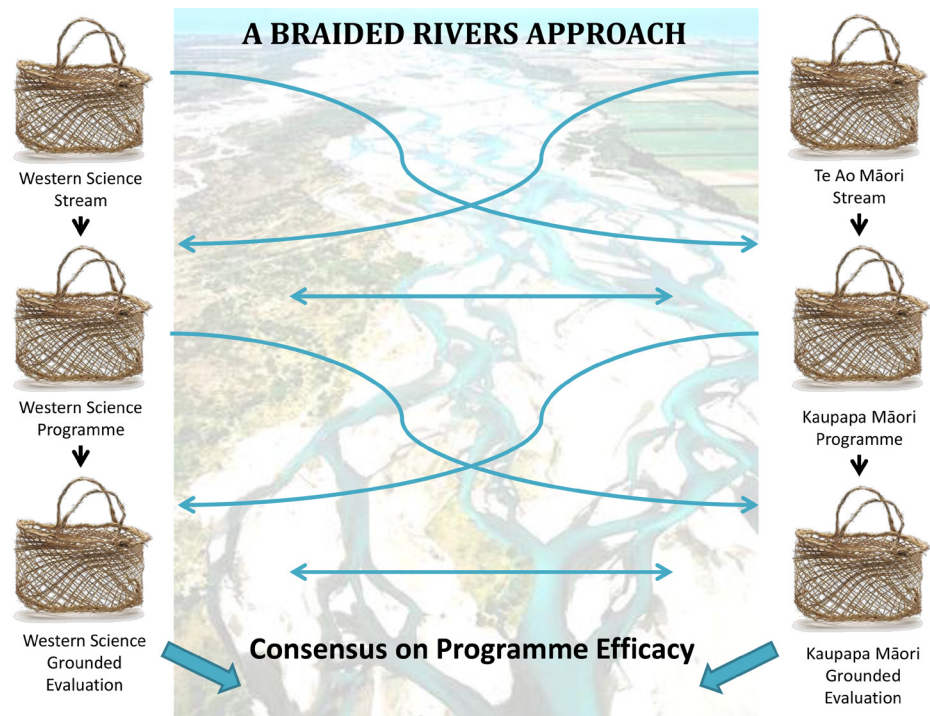
² Some members of the group are Families Commission/Superu staff. The external members are Prof Angus Macfarlane, Dr Sonja Macfarlane, Mr Maui Hudson, Mr Graham Cameron, Prof Richie Poulton and Prof Richard Bedford.

³ Discussion with Professor Angus Macfarlane about the use of the braided rivers metaphor, 17 May 2016.



2.2 The braided rivers model

Figure 1: A diagram of the He Awa Whiria – Braided Rivers model



Source: Ministry of Social Development, 2015

Māori have long recognised the value of both Western and Māori understanding, as this well-known advice from Sir Apirana Ngata shows:

E tipu e rea i ngā rā o tōu ao. Ko tōu ringa ki te rākau ā te Pākehā hei oranga mo te tinana, tōu ngākau ki ngā taonga ā o mātou tīpuna hei tikitiki mo to mähunga, a ko tōu wairua ki te Atua nāna nei ngā mea katoa.

Grow up o tender youth and thrive in the days destined for you. Give your hand to the tools of the Pākehā to provide physical sustenance, your heart to the treasures of your ancestors to adorn your head, and your soul to God to whom all things belong.

2.3_ Why is acknowledging a te ao Māori⁴ worldview important to Superu and the social sector?

Māori represent an important sector of our society who are contributors to as well as users of social services. Māori have an important role as tāngata whenua of Aotearoa New Zealand. While most Māori do well in society there continues to be an over representation of Māori in the negative statistics of socio-economic areas. Social sector agencies have a crucial role to play in reducing the disparities that are experienced by Māori. One way of addressing this is through the acknowledgement of a te ao Māori worldview in order to better meet the needs and aspirations of Māori.

2.4_ How the Treaty of Waitangi frames our thinking in the knowledge space

The Treaty of Waitangi is generally accepted as the founding document of Aotearoa New Zealand. It has had a complicated history in this country with its unwritten constitutional arrangements. While the Treaty and its articles are not enshrined in law, the principles have been included in various pieces of legislation. So it can be argued that the principles provide a pragmatic way of enabling decision-makers to give effect to the spirit and intent of the Treaty (Constitutional Advisory Panel, 2013). More recently the Treaty has come to represent the relationship between the Crown and iwi.

As Treaty claims are settled, we are moving into new and uncharted territory of post-settlement. This presents new opportunities and developments between the Crown and iwi, as well signposts for future development. Iwi who have settled with the Crown will be looking for new ways of doing things from within their respective worldviews. These also include their own hapū and iwi knowledge frameworks that shape their particular worldview.

2.5_ How the model helps us respond to increasing ethnic diversity

He Awa Whiria – Braided Rivers is a useful model as Aotearoa New Zealand becomes more ethnically diverse. This is because the model, in depicting knowledge systems as streams which are distinct but able to combine in the braiding process, recognises the uniqueness of each stream.

4 The Māori world. It encompasses values, principles, beliefs and includes how the world is perceived and interpreted in both a traditional as well as a contemporary sense.



It is predicted that the population will be made up of predominantly younger Asian, Māori and Pacific ethnicities by 2038 (Chen, 2015). (Already in Auckland, our largest city, Māori, Pacific and Asian people make up nearly 50 percent of the population.) The demographic changes will have major implications for Government policies, and on the way in which central Government and the public sector responds to the opportunities and challenges that this 'superdiversity' will create (Chen, 2015). The Chen report recommends that New Zealand develops a formal multicultural policy on a bicultural basis (Chen, 2015). It will be critical that public sector agencies can adapt the ways in which products and services are delivered to customers with diverse needs.

2.6_ How the model helps us to navigate these knowledge spaces

Professor Richard Bedford says that the source of the river begins with a representation of both knowledge systems. The river will only braid further down the riverbed because of the way the land falls and streams will only converge or braid in a certain typography (or given context).⁵ What the model allows for is the association of strands of knowledge from the different knowledge systems. As Macfarlane states:

He Awa Whiria is a metaphor developed from the need to give mana to kaupapa Māori research and programme development, when it is contested by Western science. It provides an analogy of two knowledge streams (representing Western science and kaupapa Māori), which are interconnected by minor tributaries before reaching a point of convergence. It has been valuable in Government-commissioned projects, combining the richness of both Western science and kaupapa Māori research in order to strengthen evidence and facilitate consensual decisions about programme effectiveness. (Macfarlane A. , 2015).

Since the 1980s there has been growing interest in indigenous knowledge and the need to gain further insights about sustainable conservation use and practices related to natural resources from an ecological perspective (Berkes, Colding, & Folke, 2000).

While the perspectives of Western and Māori knowledge are seen as being distinctly different, unique and valid in their own right, it has been argued that they are more effective and strengthened when they are interwoven together (Durie, 2004); (Fergusson, McNaughton, Hayne, & Cunningham, 2011); (Macfarlane, Blampied, & Macfarlane, 2011); (Mazzocchi, 2006).

According to Dr Kathie Irwin et al, the model also 'creates a constructive 'space' for the two approaches to be located within, sets out a framework for interaction and concludes with a platform that reconciles the evidence produced' (Irwin, Hetet, Maclean, & Potae, 2013).

⁵ Notes recorded from the discussion of the wānanga held 23 November 2015.

03

He Awa Whiria – Braided Rivers concepts in practice





3.1 Introduction

This section presents two case study examples of how the He Awa Whiria – Braided Rivers model can be used to implement the approach within social sector agencies with integrity. The first case study discusses a process between prevention science from a Western science perspective and a kaupapa Māori approach from a te ao Māori perspective in order to reconcile.

The second case study provides an example of how to apply the He Awa Whiria – Braided Rivers model to a social policy research context. The research looked at financial hardship through two different lens. One was a mainstream lens and the other a kaupapa Māori lens, leading to two sets of knowledge.

3.2 Case study 1: He Awa Whiria – Braided Rivers and conduct problems

This is a social science example of braiding prevention science and kaupapa Māori. The Advisory Group on Conduct Problems set up a group of experts called Te Roopu Kaitiaki (TRK). Their role was to provide better understanding and advice, and make recommendations on conduct problems for tamariki (children) and taiohi (young people) Māori from a te ao Māori perspective.

The TRK report provided the te ao Māori context by drawing from mātauranga Māori, both traditional and contemporary, and through the use of pūrākau (story telling). Careful deciphering and analysis of the myth messages within these pūrākau were carried out (Cherrington, 2009). This demonstrated the importance of ensuring that experts with the appropriate cultural intelligence were a part of the group. The group then presented a conceptualisation of conduct problems informed by mātauranga Māori which was based upon the separation of Rangi (Sky father) and Papatūānuku (Earth mother). This symbolised the importance of identity and connection to whānau and how separation from these can contribute towards conduct problems for tamariki and taiohi.

Professor Richie Poulton (2015)⁶ explained that the AGCP had been able to work its way through the Western science stream. However the group floundered when they needed to address issues of Māori responsiveness and appropriateness. They were then led through a process by Professor Angus Macfarlane (who had been a member of TRK) to braid the knowledge together. That process became the He Awa Whiria – Braided Rivers approach. They found that some of the concepts were able to be braided in and other concepts were not. It was significant that a specific conceptual space needed to be created. Then group members could discuss and debate ideas and concepts within an environment of mutual respect and trust where the knowledge of both strands was afforded integrity. If a particular concept existed in just one knowledge strand then that becomes the dominant strand in relation to that concept. In this way, the He Awa Whiria – Braided Rivers model emerged.

⁶ Internal memo of conversation with Richie Poulton, 24 February 2015.

The achievement of the AGCP was to reconcile the efficacy of programme interventions. This ensured they fit within a culturally appropriate or culturally responsive frame of reference. It also opened up the dialogue for further discussion. This included discussions about evidence in terms of who defines and who determines what constitutes quality evidence and on what basis or body of knowledge quality is evidence defined and determined.

3.3 Case Study 2. He Awa Whiria – Braided Rivers and the Families Commission

This is an example of how the He Awa Whiria – Braided Rivers model was used to implement a research project in the Families Commission. The primary focus of this research was on financial hardship and how families and whānau manage in times of hardship.

The Families Commission carried out five case studies with 40 families and whānau in diverse communities across Aotearoa New Zealand. Two of the case studies were kaupapa Māori case studies.

Te Pūmautanga o te Whānau: Tūhoe and South Auckland Whānau (2012) and One Step at a Time: Financial Hardship involved the development of two project plans. The methodological approaches differed in terms of the lens used to develop and design the research. One used a Western science lens and the other used a kaupapa Māori lens. The kaupapa Māori process enabled Māori whānau and communities to draw on, describe and contextualise their worlds through the use of iwi and Māori knowledge, concepts and processes.

The research showed some commonalities as both approaches:

- shared the same project goals and outcomes for families and whānau
- used the same case study methodology for all cases
- shared key research questions, had the same number of families and/or whānau within each case (with larger whānau in the Māori study), and identified and interviewed providers working with families and whānau
- identified common research questions (but used different interview questions).

The output was that two reports were produced – one kaupapa Māori and the other a more mainstream blended approach. An advantage of doing this was that it allowed for the recognition of two different audiences who wanted to access the research. It enabled the voices of the research participants to be heard. More importantly, it produced knowledge and evidence from two different lens that highlighted insights and nuances that otherwise would not have been illuminated. This in turn has contributed to our ability to be able to draw upon new knowledge and improved understanding about whānau and family resilience in times of financial hardship and adversity.



04

The Negotiated Spaces model



The Negotiated Spaces model was developed out of a Foundation for Research, Science and Technology (FRST) funded research project entitled Te Hau Mihi Ata.⁷ This was run by the Te Kotahi Research Institute at Waikato University. Overall aims of the project were to:

- explore how differing knowledge systems can better connect through the use and development of appropriate dialogue processes
- explore the opportunities that could potentially develop as a result of new knowledge creation.

The model proposes a platform for ‘conversations’ that can identify commonalities, tensions and uniqueness across traditional Western and te ao Māori perspectives. This in turn can foster increased responsiveness and innovation for the social sector.

When we reviewed the literature and looked at the Negotiated Spaces model we recognised its relevance to He Awa Whiria – Braided Rivers. Initially we saw Negotiated Spaces as a tool that can negotiate, or be applied in a practical way, at the nexus or junctures of where various streams of knowledge are able to be connected (Hudson, Roberts, Smith, Tiakiwai, & Hemi, 2012).

According to the researchers, the project came about because of concerns that mātauranga Māori:

- is framed as ‘only relevant in a traditional context’
- has been positioned to encourage researchers to ‘unlock the innovation potential of Māori knowledge, people and resources’ (Hudson, Roberts, Smith, Tiakiwai, & Hemi, 2012).

The Te Hau Mihi Ata research sought to position mātauranga Māori as an adaptive and innovative knowledge system within a changing technological and knowledge-based economic paradigm. This research acknowledged the marginalisation of mātauranga Māori through colonisation processes as Western science had usurped it as the dominant knowledge system.

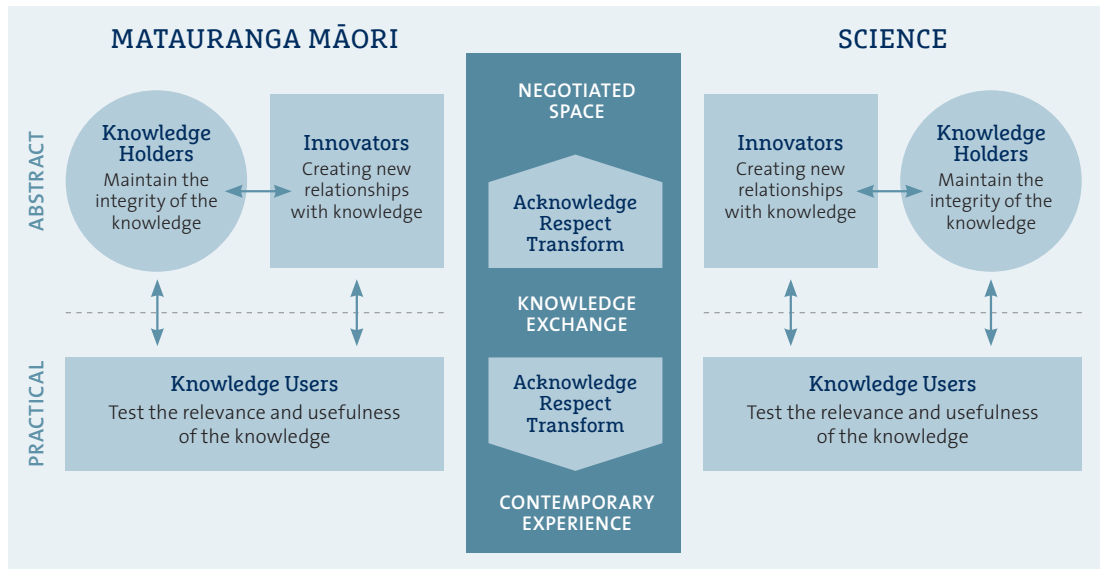
Durie argues that Western science developed an intolerance to indigenous knowledge, including Māori knowledge systems. Māori in turn developed a distrust of Western knowledge for its inability to incorporate and interpret a Māori worldview (Durie, 2004). The indigenous response was to withdraw knowledge beliefs and systems to safe spaces where they could be maintained and developed generally in isolation from Western science. This positioning also acknowledges the power imbalance, inequity, colonisation and marginalisation that adds layers of complexity to be considered when engaging with these models (Durie, 2004).

Revitalised interest in Māori knowledge from scientific and economic interests has promoted responses from te ao Māori. Māori researchers recognised the distrust and unwillingness to engage with Western science of te ao Māori and communities. They realised that culturally safe dialogue models and processes were required to allow meaningful conversations to take place. The Negotiated Spaces model is one such ‘dialogue tool’ to emerge from this (Smith, et al., 2013).

⁷ Te Hau Mihi Ata powerpoint presentation to the Nga Pae o te Maramatanga Conference, Te Tatau Pounamu, 9 June 2008.



Figure 2 _ A diagram of the Negotiated Spaces conceptual model



Source: Hudson, Roberts, Smith, Tiakiwai, & Hemi, 2012

The model operates at two levels where mātauranga Māori and Western science are positioned alongside each other. It shows how these knowledge systems are on an equal footing. At the abstract level in the systems are knowledge holders and innovators and at the practical level are knowledge users (Smith, et al., 2013).

Theoretically the negotiated space is where relationships, ideas and values are realigned, renegotiated, and resolutions and agreements are sought. It is more than mere knowledge exchange as it involves the willingness and ability to engage in meaningful and respectful relationships. The researchers state that:

The model provides a significant contribution to the conceptualisation and conduct of effective engagement as a higher order process, requiring a focus on establishing deep relationships engaging with beliefs, values and experiences as much as knowledge (Smith, et al., 2013).

At the conceptual level, the model explores the space of intersection between different ways of knowing and sense-making. We have come to refer to this as the braiding in and braiding out of knowledge strands from one to another.

4.1 Case study: The Negotiated Spaces model in action

This is an example of braiding knowledge between mātauranga Māori and Māori scientists.

Advances in science in new biotechnologies, such as genetic modification, have meant that Māori, as well as mātauranga Māori, have needed to find ways of responding. In order to explore the interface between these advances and the impacts for Māori, the project team developed a process of staged dialogue between mātauranga Māori experts and Māori scientists. The aim was to provide the space for them to explore the issues in an environment of openness and critical reflection.

The researchers considered the traditional use of wānanga and adapted it to fit a contemporary context. From this they developed a method of wānanga dialogues to facilitate cross-cultural conversation between mātauranga Māori and science. A series of wānanga was held, as one of the objectives was to 'develop, over time, a reliable dialogue process by which two distinct systems of knowledge might meet and connect in an effective, respectful, and productive manner' (Smith, et al., 2013).

Several groups were involved in the wānanga dialogues. There were mauri holders as an advisory group to the research (consisting of a mix of mātauranga Māori experts and future science leaders) and mātauranga Māori experts (made up of traditional knowledge holders who are recognised as having standing in their respective communities). There were also Māori scientists who are highly regarded in their scientific roles and have a sense of connection to te ao Māori.

Seven wānanga were held. Three were related to specific biotechnologies to do with such as assisted reproduction, life and food. A further three were assigned to the development and testing of dialogue processes. The final one was held as a 'proof of concept' wānanga and included non-Māori scientists.

The wānanga observations, debates, conversations and interactions were analysed by the research team. The research found that tensions between the groups arose at this early stage. For instance, the scientists struggled with issues concerning the conflicts of identity and finding themselves in what they termed the 'in-between space' working as Māori scientists in mainstream environments. Likewise the mātauranga Māori group, while secure in their identity, felt that they had to continually validate the position of their association with mātauranga Māori. Therefore, even though the wānanga had involved Māori scientists, tensions between these knowledge systems were not eliminated.

The analysis also showed that participation in dialogue processes was affected by status. This meant that participants may have restricted their ability to engage through the expression of their ideas and the acceptance of the opinions of others. This 'was influenced by factors such as age, experience, status, qualifications, language and te reo Māori ability, gender, and sources of knowledge' (Smith, et al., 2013).

From these findings the research team were able to build in principles of engagement into the dialogue process. The researchers acknowledged the time needed to reach a point of reconciliation. They identified these key principles that informed the Negotiated Spaces model:

- acknowledging and accepting the validity of each other's systems
- creating a safe environment for people to engage with respect
- being open to change and the potential for transformation (Smith, et al., 2013).



05

Bridging Cultural Perspectives – a proposed implementation process

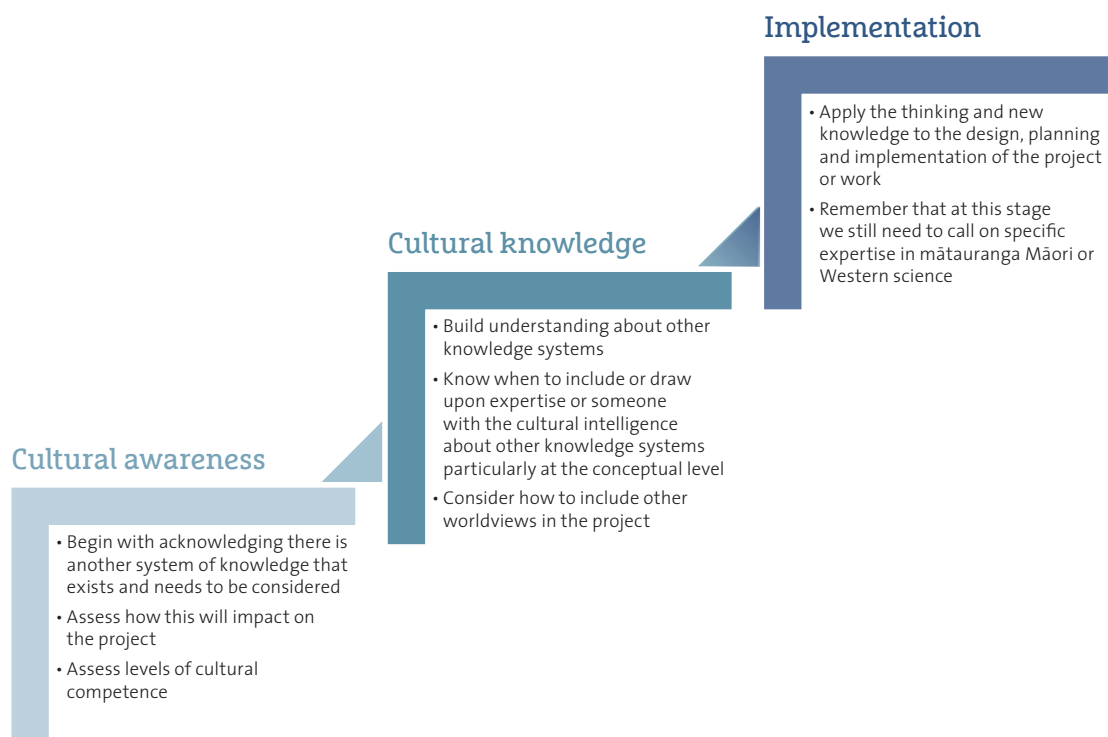
This chapter of the paper introduces and outlines a proposed implementation process. As we applied the two models, we found that they merged. As we have seen, one, He Awa Whiria – Braided Rivers, considers the exchange of knowledge and the other, Negotiated Spaces, provides for respectful and negotiated conversations and the development of relationships.

The building of relationships ensures that issues around ethics, integrity and cultural appropriateness are considered. Combining the two models means that they have merged into the Bridging Cultural Perspectives approach.

We need to ensure that we adopt a process that can be used effectively by practitioners, researchers, and/or policymakers. The process should be flexible. The diagram below shows the phased stages of development that are recommended when applying a Bridging Cultural Perspectives approach to projects and work practice. This will often be driven by the contextual environment and the purpose of the work.

5.1 Proposed implementation model

Figure 3 Proposed implementation model



Awareness

Acknowledging the existence of other ways of viewing and interpreting the world is a step towards building awareness and acceptance of the Bridging Cultural Perspectives approach. This will assist policy decision makers, researchers, evaluators and funders who want to work in a cross-cultural context to improve their skills and understanding.



Knowledge

Building understanding about other knowledge systems to improve cross-cultural understanding and competence will be essential to the design and planning of projects. It relates to the way other worldviews or perspectives are included. At this stage you might need to consider calling upon the assistance and expertise of those who have the required in-depth knowledge and cultural intelligence to interpret or translate.

Implementation

The Bridging Cultural Perspectives approach will involve a significant shift in terms of how we think about and plan projects, policy and programme interventions. We must do this if we are to accommodate the needs and requirements of a diverse society that is evolving very fast.

5.2 What is cultural intelligence?

The concepts of cultural competence and intelligence were raised at the wānanga as needing some discussion when working across or between different worldviews. The Steering Group and the wānanga participants drew the conclusion that not only were cultural awareness and competence needed to consider differing worldviews but also cultural intelligence. According to Graham Cameron, a member of the Steering Group and Superu's Whānau Reference Group, training around how to work cross-culturally has brought about changes to learners' understanding and awareness of other cultures. However, the learner is not always encouraged to reflect on themselves as a person of culture or to critically assess their own culture.

Respectful assertion and contributing to the dialogue is an act of Cultural Intelligence. To understand whether a service has acted appropriately and safely, there is a need to assess the intelligent engagement of people in their own and in others' cultures. The behaviours necessary to assist and support people to maintain their own culture and participate respectfully in your own and others' culture requires a consciousness about oneself and others.

Cultural intelligence is more than the ability to be able to understand and interpret knowledge from within one's own cultural worldview. It is also the ability to articulate, interpret and translate particular knowledge at the interface of other cultures and knowledge systems.

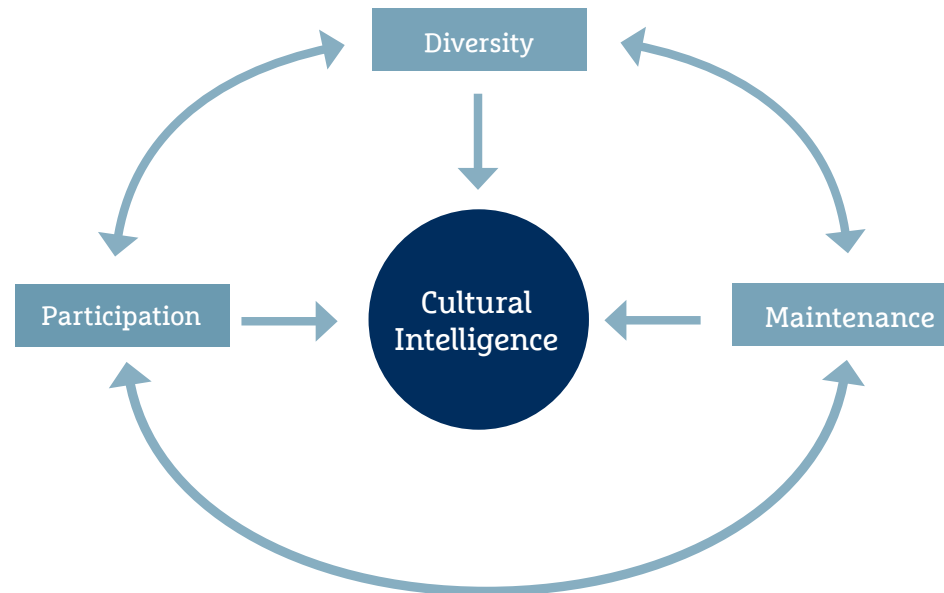
Cultural intelligence includes the ability to cross the borders and boundaries of other cultures or of those that are different from your own.⁸

The following diagram was developed through the discussions of the Superu Whānau Reference Group members. It illustrates a model for cross-cultural dialogue which is relevant to the Bridging Cultural Perspectives project.⁹ As can be seen in the diagram, diversity, participation and maintenance all contribute to cultural intelligence.

⁸ Wānanga notes of 23 November 2015 and notes shared by Graham Cameron, member of the Steering Group and Superu's Whānau Reference Group.

⁹ Whānau Reference Group notes from meeting on 11 August 2016.

Figure 4_ Cultural intelligence – a model for cross-cultural dialogue



Cultural maintenance

This describes the activities, people and resources that are necessary to maintain a culture. Generally, this must be led by people of that culture. The role for people of other cultures is to support and even protect people who are attempting to maintain their culture. Some features of cultural maintenance are:

- the development, use and acceptance of safe spaces
- the extent to which strategising, planning, development, implementation and resourcing are self-determined
- clear strategies for maintaining language and other cultural processes and practices
- accountability and governance in which integrity and healthy practices are encouraged
- leadership from within a community and culture which is encouraged and supported
- boundaries to protect and enable the use of cultural practices and processes.

Cultural participation

This is most often apparent in spaces that are clearly culturally grounded where people of diverse cultures can co-operate and meet to build connection, understanding and insight. Some examples include:

- spaces that invite people to dialogue and engage in mutual learning
- an openness to diversity particularly in decision-making
- the inclusion of diverse communities and cultural expressions in celebrations
- integration within a wider community, while being supported to maintain a distinct cultural identity.¹⁰

¹⁰ Discussion with Graham Cameron and Whānau Reference group, August 2016.

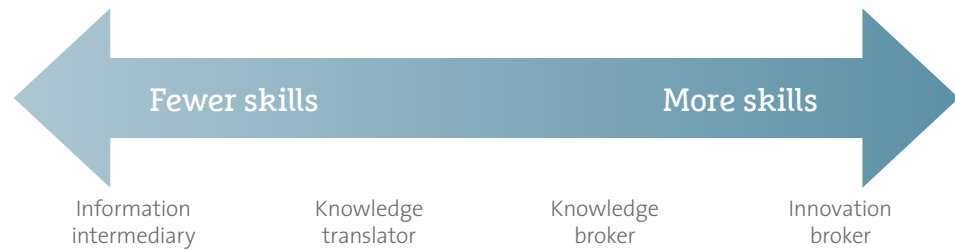


The framework presented below proposes a set of roles and types of activities around these roles on a continuum. It then shows how these integrate with the Bridging Cultural Perspectives approach when looked at within the continuum.

There are four possible roles, depending on the cross-cultural skills of the practitioner:

- information intermediary
- knowledge translator
- knowledge broker
- innovation broker

Figure 5 _ Cultural participation roles



Situating the current project in this continuum, the project as it is currently positioned has focused mainly on the *Information intermediary* and *Knowledge translator* roles of the table on the next page.



TABLE 01
Contexts for implementing a Bridging Cultural Perspectives approach underpinned by He Awa Whiria – Braided Rivers and Negotiated Spaces with integrity

Role	Information intermediary	Knowledge translator	Knowledge broker	Innovation broker
Purpose	Enabling access to information from multiple sources.	Helping people make sense of and apply information from a cultural perspective (knowledge system).	Improving knowledge use from different cultural perspectives in decision-making.	Drawing across cultural perspectives to gain insights to enable innovation.
Types of activities	Activities that gather, organise and distribute information from a cultural perspective (knowledge system). These activities inform, aggregate, compile and signal awareness and understanding.	Activities that synthesise and translate information in the gap between knowledge and practice. This includes to disseminate, translate, and communicate knowledge as it relates to <i>doing</i> .	Activities that facilitate the exchange of information from one or more cultural perspectives (knowledge systems) either through two way or multiway processes. These activities bridge, connect, span boundaries and facilitate respectful knowledge transfer and exchange.	Activities that identify opportunities, broker relationships, encourage collaboration and push boundaries to pro-actively find new solutions.
Bridging Cultural Perspectives	Refine understanding and implement for our own use with outcomes published as part of our research reports and papers. <i>Eg. the dual knowledge frameworks that underpin the Families and Whānau Status Reports.</i>	Create resources, guidelines and document case study examples about how to implement approaches underpinned by Bridging Cultural Perspectives with integrity. <i>Eg. Publication of this report and the Bridging Cultural Perspectives case study chapter in the Families and Whānau Status Report 2017.</i>	Actively offer and conduct workshops to help others understand and implement Bridging Cultural Perspectives with integrity. <i>Case studies which involve bringing together research from different knowledge systems for evaluation and decision-making purposes.</i>	Actively champion, educate and facilitate use of the approach across the social sector (and potentially across government). <i>Case studies which involve negotiated dialogue between different knowledge systems with the intent of identifying new approaches and solutions.</i>

Adapted from a model proposed by Fisher C. (2010) Knowledge and Intermediary Concepts.



5.3 Opportunities in this continuum

The steering group and wānanga participants have identified a need for a knowledge, and ideally innovation, brokering role.

Attendees at the wānanga also said there is substantial value in actively championing this approach and its use (with integrity) across government. The findings of the wānanga as well as the discussions of the Steering Group were that Bridging Cultural Perspectives should be about transforming the outcomes for families and whānau.

5.4 The markers of integrity

There are two further important components to consider in implementing the Bridging Cultural Perspectives model. One is the notion of integrity and the other is the ethics that should be applied to processes involving the engagement of Māori indigenous knowledge and Western science. Successful implementation of the model will require careful negotiation when establishing procedures and guidelines. This will include discussion on how to implement, create and open up knowledge spaces, knowledge exchange, engagement spaces and negotiation spaces. More importantly is the understanding that we are working with distinct knowledge systems and how this will impact on the implementation.

The markers of integrity are:

- partnership (collaboration)
- protection
- participation
- respect
- honesty
- relevance
- reciprocity.

Several instruments can be drawn upon when considering markers of integrity. One example is the Evaluation Standards for Aotearoa New Zealand. These standards were developed jointly by Aotearoa New Zealand Evaluation Association (ANZEA) and Superu. They are a guide to promote and facilitate quality and excellence in evaluation practice throughout Aotearoa New Zealand. The evaluation standards have been included in this discussion as they are driven by a set of core principles rather than a set of rules to follow (Social Policy Evaluation and Research Unit (Superu), 2015). More importantly, the principles are supported by the core value which is integrity. This is why we felt that they would be an appropriate resource and guide for this work. Particular reference is made to Te Tiriti o Waitangi. This reflects the unique bi-cultural context in Aotearoa New Zealand and also provides a platform for multicultural inclusion.

Four principles frame the standards:

- respectful and meaningful relationships
- ethics of care
- responsive methodologies and trustworthy results
- competence and usefulness.

The evaluation standards were written as a guide for quality practice in evaluation and to provide a 'working philosophy of evaluation' (Social Policy Evaluation and Research Unit (Superu), 2015). However, we believe the standards provide an example of how to consider different worldviews with integrity.

The standards can be found on thehub.superu.govt.nz

Markers of integrity

An important, but often invisible aspect of group dynamics, is the explicit acknowledgement that power, position, identity and privilege are critical determinants of an effective dialogue process (Te Hau Mihi Ata, 2008). The markers of integrity are critical when implementing an approach that spans worldviews and leads to purposeful conversations where they are underpinned by a Bridging Cultural Perspectives approach.





TABLE 02

Markers of integrity in practice

Markers	Application
Partnership (collaboration)	Ensure Māori and indigenous peoples can tell their stories in their own voice (Porsanger, 2008) Provide enough time and space for clear and explicit discussion about how the results will be used
Protection	Ensure that the intellectual property rights of Māori and indigenous peoples will be observed and protected from misuse and misrepresentation (Porsanger, 2014)
Participation	Ensure that dialogue spaces are culturally safe for open debate and discussion Recognise that the dialogue space fosters open inquiry and discussion Build trust between the different groups early
Respect	Acknowledge that in Aotearoa New Zealand we recognise and value two distinct knowledge systems, Western science and mātauranga Māori, as well as other knowledge systems
Honesty	Acknowledge any lack of understanding about other knowledge systems. This then provides a basis to understand the extent of the cultural divide between different groups (Te Hau Mihi Ata, 2008) Understand that there is more than one truth
Relevance	Be clear about who will benefit and how they will benefit Provide clear articulation and understanding of the aims and use of results
Reciprocity	Negotiate from the beginning of the research process or evaluation. Consider how the research or evaluation is to be conducted and analysed and how the results of the work will be shared with others

The following documents can be used as helpful guides and as background information. They help explain why it is important to ensure that processes that involve working with other cultural perspectives are respectful and should be implemented with integrity.

The Mataatua Declaration on Cultural and Intellectual Property Rights of Indigenous Peoples

The Mataatua Declaration was the first international conference on the cultural and intellectual property rights of indigenous peoples. Fourteen countries were represented, along with the nine tribes of the Mataatua waka alliance. The gathering met to discuss significant issues including indigenous knowledge. This ranged from new scientific technologies such as biodiversity and biotechnology to language and various other physical and spiritual cultural forms. The declaration was the outcome of the gathering. It was presented to United Nations member states and called upon the United Nations to:

Adopt or strengthen appropriate policies and/or legal instruments that will protect indigenous intellectual and cultural property and the right to preserve customary and administrative systems and practices (Commission on Human Rights, 1993).

The declaration is still relevant to iwi and indigenous peoples today as it recognises their rights as the exclusive owners of their cultural and intellectual property. It also acknowledges and affirms their shared history of exploitation of cultural and intellectual property. As well, it states that the knowledge of indigenous people is beneficial to humanity (Commission on Human Rights, 1993).

The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)

This declaration was adopted by the United Nations in 2007 and places obligations on the countries that sign up to it. The declaration outlines the rights of indigenous peoples to determine their entitlements and to maintain their social, cultural, economic and political structures, histories, traditions and philosophies. Several articles contained in the charter reinforce the resolutions. Article 31 of the Declaration says:

Indigenous people have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of the sciences, technologies and cultures, including human and genetic resources, seeds medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions.’ (United Nations, 2008).

More importantly, the declaration implores governments to translate the articles into policy and practice with regard to the principles of justice, respect for human rights, equality, non-discrimination, good governance and good faith. (United Nations, 2008).

Waitangi Tribunal report, Wai 262 inquiry (Flora and Fauna)

This report was in response to a series of related claims lodged with the Waitangi Tribunal. The claims raised the issues of protection of mātauranga Māori and indigenous flora and fauna. Claimants asserted that these were afforded protection through Article Two of the Treaty of Waitangi. The report has useful guides and information about providing some definitions of mātauranga Māori, particularly how it relates to the Article Two interpretation of the Treaty. It also discusses the emerging relationship between the Crown and Māori. For example, there are references to mātauranga Māori, and its key defining principle of whanaungatanga or kinship, as being a philosophy that explains the intimate relationship between iwi and hapū and the natural world. (Waitangi Tribunal, 2011).

Another key principle referred to is kaitiakitanga, which is defined as ‘cultural guardianship’. It recognises the responsibility and obligation to care for and nurture ‘ngā taonga tuku iho’ or those treasured things inherited from generations past for future generations (Waitangi Tribunal, 2011). This claim also recognises that the Crown has a crucial role as it controls aspects of mātauranga Māori such as the conservation estate.



06

Conclusions

A growing number of scientists and iwi currently collaborate on conservation, environmental resource management, energy, new scientific technologies and social sciences. There is a need to provide further information and understanding about how to engage in respectful, effective and purposeful dialogue. This must lead to meaningful outcomes that contribute towards a healthy and vibrant society that recognises and engages with more than one system of knowledge.

All cultures are intellectually curious about their environment and the world. They are all driven to ponder, theorise, examine and experiment in the interests of sustainability and survival for future generations. All worldviews are underpinned and informed by knowledge systems which in turn contribute to a sense of identity and wellbeing.

In this document, we acknowledge the challenges that come with venturing into knowledge spaces that may push our boundaries and experiences beyond where we might like to go. It takes courage to do this. However, the benefits of the creation of new knowledge and insights and new and different ways of thinking will lead to innovation as well as social, cultural, technological and economic growth.

07

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Appendix 1:

Our approach (methods) of literature sources for Bridging Cultural Perspective

We used a range of methods to inform this document and our thinking:

1. a scan of selected literature
2. conversations with the project steering group
3. discussions from the wānanga
4. feedback from presentations, conversations and discussions with interested groups.

Scan of selected literature

The purpose of the literature scan was to assist us to address the research question. How can we better understand how and when to effectively 'braid' the approaches in practice within Superu?

We also aimed to connect the literature to the intended outcomes of the project. These were based around improving our knowledge and understanding about He Awa Whiria – Braided Rivers and Negotiated Spaces. We wanted to see how this fits with our work but also how we could apply the models to our work. He Awa Whiria – Braided Rivers features predominantly in the Families and Whānau Wellbeing research which Superu carried out until 2018 and which now sits with the Ministry of Social Development (MSD).

Another outcome was to identify how we could embed the thinking of He Awa Whiria – Braided Rivers into the strategic planning and work cycle of Superu.

The scan began with a Google search as well as a Google Scholar search in order to identify relevant (scholarly) articles, and publications. We searched under the headings:

- He Awa Whiria – Braided Rivers (146 results)
- Western science and Māori knowledge (544,000 results)
- Bioethics and mātauranga Māori (61,500 results)
- Neuroscience and Māori knowledge (227,000 results)

Steering Group

The Steering Group is made up of experts with conceptual and theoretical knowledge of He Awa Whiria – Braided Rivers and Negotiated Spaces. It also includes key advisers from MSD and Superu. The group also advises on the suitability and applicability of He Awa Whiria – Braided Rivers.

The purpose of the Steering Group is to provide guidance and expertise to the project. This includes assisting the project team to develop and implement the project in Superu, MSD and, where applicable, across the social sector. The group's role is to:

- provide high level, quality assurance to ensure the project is sound and relevant
- provide advice and expertise in research and/or evaluation methodology in both kaupapa Māori and Western science research
- provide expert advice on the approach, methodology and analysis
- contribute to the identification of similar examples where a He Awa Whiria – Braided Rivers model has been developed and implemented
- contribute to identifying suitable attendees for the wānanga.



Wānanga

Based upon our scan of the literature, this project presented a number of challenges. It pushed the conceptual boundaries of how to think about and approach research, evaluation and policy development in a different way. Our literature search¹¹ demonstrated that ‘any form of knowledge makes sense only within its own cultural context’. Furthermore, mātauranga Māori has evolved fundamentally diverse ways in which to create and transmit knowledge, making them challenging to analyse using the criteria from another knowledge system.

We considered the use of wānanga as a methodological approach because it would create a fitting space for conversations of this nature to occur. It also allowed us to consider the power dynamic involved when dealing with knowledge systems coming both from a dominant knowledge paradigm and from a marginalised knowledge paradigm (Smith et al., 2013).

Wānanga are concerned with ensuring that knowledge is not only maintained but also created. They are inextricably linked to mātauranga Māori. The actions that accrue from the wānanga lead to the advancements in mātauranga Māori in various ways (Royal, 2012).

The people who attended the wānanga were academics, researchers, including community based researchers, and government officials. The wānanga was recorded and video-taped. The notes were sent out to the members to review and provide feedback. The final notes were then analysed to identify the key messages.

Feedback from discussions and presentations

We also presented at a number of different events as this gave us the opportunity to receive feedback. There were a number of conversations that were held with various groups as well as individuals and this information was analysed and included in this report.

¹¹ See for instance Paul Feyerabend as cited in Mazzocchi, F. (2006).

Section B

Annotated bibliography





Introduction

This annotated bibliography provides a range of some of the more seminal pieces of literature that we reviewed in order to develop our thinking about Bridging Cultural Perspectives and how we arrived at this point. There is a significant amount of literature and scholarship available that discusses compares and provides analyses of knowledge systems that initially can be seen as being at opposite ends to each other. We selected and included the most relevant items of literature for this review.

Purpose

The purpose of the literature review was to help address the research question. We also sought to connect the literature to the intended outcomes of the project which were based around improving our knowledge and understanding about He Awa Whiria – Braided Rivers and Negotiated Spaces and how this fits with our work but also how we can apply the models to our work. He Awa Whiria – Braided Rivers features predominantly in the Families and Whānau wellbeing research.

1. **Advisory Group on Conduct Problems. (2011). Conduct Problems: Best Practice Report. Wellington.**

Type: Report

This was the third report in a series of reports by the Advisory Group on Conduct Problems. This article discusses the prevention, treatment and management of conduct problems in children and adolescents in Aotearoa New Zealand. It dovetails off the first report which identified a Treaty-based platform for developing policy and programme interventions for conduct problems. The relevance of this report to the He Awa Whiria – Braided Rivers work in the social sector is that it positions the Treaty of Waitangi as the platform for addressing conduct problems in the context of developing policy in Aotearoa New Zealand. The report then advocates the parallel development of Te Ao Māori and generic policy development particularly in relation to science prevention methodology and kaupapa Māori.

How is the article helpful to the topic?

This article helps us understand some of the early background to He Awa Whiria – Braided Rivers.

2. **Aigner, G., Godwell, C., Martin, J., Paulson, G., Rawnsley, J., Robertson, K., Yettica-Paulson, M. (2014). *Lost conversations: finding new ways for black and white Australians to lead together* (1st ed.). Australia: Creative Commons.**
-

Type: Book

This book discusses how to have uncomfortable conversations. These are the conversations that people are reluctant to have or lack knowledge of how to begin or restart the conversation. The contextual background is the relationship between indigenous peoples in Australia and white Australians. It discusses the complexities, challenges and difficulties involved in navigating and opening up dialogue pathways to have conversations that have evolved out of a deep historical sense of distrust and misunderstanding. The other key ideas in the book are about power, the types of power, such as formal and informal power, that people and groups use knowingly or unknowingly.

How is the article helpful to the topic?

It helps us understand the value of the conversation as a lead into a facilitated dialogue space and the ethics and principles that should be negotiated prior to stepping into the dialogue space.

3. **Barnhardt, R., & Kawagley, A.O. (2005). *Indigenous knowledge systems and Alaska Native ways of knowing*. *Anthropology and Education quarterly*, 36 (1), pp. 8-23.**
-

Type: Journal article

This article discusses the motivation of a new generation of indigenous scholars in Alaska who want to shift indigenous knowledge from the margins to the centre of the educational research field. The article assists in expanding the reader's understanding about the processes of learning that transpire when different world views and knowledge systems intersect and interact with each other. They then draw on experiences that have derived from fourth world contexts that the authors drew from the Alaskan native context. They then go on to discuss, describe, and outline the educational initiatives that will go some way to addressing the epistemological and pedagogical underpinnings of indigenous ways of knowing and Western knowledge as they converge in educational settings. The authors state that Western knowledge influences daily the lives of indigenous communities and students, creating a sense of estrangement between them and external institutions. Building relationships between indigenous communities as well as the external institutions is a critical part of the process where indigenous knowledge and Western science intersect with each other.

How is the article helpful to the topic?

This article examines Western science and indigenous knowledge from an indigenous perspective and how they can improve educational experience and outcomes for indigenous students when used together.



4. **Berkes, F., Colding, J., & Folke, C. (2014). Rediscovery of Traditional Ecological Knowledge as Adaptive Management. *Ecological Applications*, 10(5), 1251–1262. doi:10.1890/1051-0761(2000)010[1251:ROTEKA]2.0.CO;2**
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Type: Journal article

This article discusses the importance of Traditional Ecological Knowledge (TEK) and perspectives around the sustainable management and practices of natural and ecological resources. Interest in indigenous traditional knowledge for scientific, social or economic reasons has increased around the world as alternatives are sought to contribute new knowledge to conservations about ecological biodiversity practices and issues as they arise. The article explores the role of indigenous communities in using TEK and practices to respond to and manage complexity of ecosystems which are relied on as a means of sustainability. A selection of management practices are identified and discussed based upon local ecological knowledge. These practices range from monitoring of certain species, for example fisheries, to practices that enable indigenous communities to respond to and manage disturbance and build resilience (pg.1252). The article also discusses and identifies the worldview and associated custom that underpin how the knowledge is generated and passed on. Finally the article provides an evaluation in table format of the qualitative insights of the sustainable management of resources and ecosystems.

How is the article helpful to the topic?

This article provides us with another perspective on how we can benefit from considering more than one body of knowledge.

5. **Cheung, M. (2008) The reductionist – holistic worldview dilemma. *MAI Review*, pgs. 1 – 7. Retrieved from <http://www.review.mai.ac.nz>**
-

Type: Journal article

In this article Melanie Cheung provides an understanding of the scientific worldview and Māori worldview. In particular Cheung discusses the challenges and tensions of Māori scientists who, through the very nature of their work, operate between the reductionism of scientific research and holism of their Māori worldviews. She argues that while others see this as being an advantage in their work it also comes with its own set of dilemmas. According to Cheung, worldview is important in science as it provides a frame of reference for 'interaction with others which in turn provides a basis upon which research approaches and interpretations are constructed' (pg.1). The imposition of one worldview on another is not helpful says Cheung, as each has strengths. Each brings new insights and diversity in their differences and this makes them both powerful. She advocates that scientists and Māori should work together as they both share aspirations for knowledge as well as a desire to understand and make sense of the world.

How is the article helpful to the topic?

This article demonstrates the benefits of working across knowledge systems that appear to be in total opposition to each other. It also reminds us of the need to incorporate a process that allows conversations and dialogue to occur.

6. **Durie, M., (2004) Exploring the interface between science and indigenous knowledge, Massey University, New Zealand.**

Type: Research paper

This article discusses the potential of exploring the interface of indigenous knowledge and science in order to identify creativity and innovation that can arise from being able to utilise and apply knowledge systems in association with each other. The article recognises the global dominance of Western science and there is an acknowledgement that when science and indigenous knowledge are pitted against each other this does not produce the new or innovative knowledge that they have the potential to without compromising the fundamental integrity that underpins both. The author posits the idea of 'research at the interface' and states that its difference to research is that it owes the discovery of new and/or innovative knowledge to the insights that can be gleaned from more than one knowledge system. In this sense they advocate that indigenous researchers have a crucial role in bridging the gap between Western science and indigenous knowledge as knowledge intermediaries and translators. This is due to their ability to navigate across two systems of knowledge.

How is the article helpful to the topic?

This article is helpful as it introduces and discusses the concept of 'interface research' (pg.8). It also describes what makes it different from mātauranga Māori research and from Western scientific research. It reminds us that we are interfacing with two differing bodies of knowledge and that one cannot be used to analyse and understand the foundation of the other.

7. **Kukutai, T. & Taylor, J. (Eds) (2016) Indigenous data sovereignty: toward an agenda. ANU Press. Australia.**

Type: Book

This is a book that begins a conversation amongst indigenous peoples about indigenous data sovereignty. Nineteen authors have contributed their collective expertise on a wide range of issues to do with indigenous data sovereignty. The book is structured into four sections and covers issues from the key concepts, historical background, critiques of the postcolonial statistical systems, case studies presented from different indigenous populations and concludes with the reflections of authors who discuss how to better collect and generate data that reflects the realities and future aspirations of indigenous peoples. In an era of what the editors describe as the 'global data revolution' indigenous populations around the world remain unseen yet exposed and vulnerable by the lack of government intervention to protect the rights of indigenous peoples from bio theft and misuse of their intellectual knowledge and data. Chapter two of the book is dedicated to a discussion on the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) as an instrument about human rights as they apply to indigenous peoples. UNDRIP is therefore imperative to understanding indigenous data sovereignty.

How is the article helpful to the topic?

This article helps us understand the issues surrounding indigenous data sovereignty and the links to indigenous peoples epistemologies and ongoing knowledge building.



8. Macfarlane, A., Macfarlane, S., and Gillon, G. (2015) Sharing the food baskets of knowledge: creating the space for a blending of streams. In A. Macfarlane, S. Macfarlane, & M. Webber (Eds.), *Sociocultural Realities: exploring new horizons*, (pp52-66) Christchurch, Canterbury University Press.
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Type: Chapter article

This article discusses the theoretical positioning of different knowledge systems, in particular the dominant positioning of Western knowledge over other knowledge systems within the context of sociocultural theory (in particular the disciplines of education, sociology and psychology). The authors suggest that while Western knowledge is essentially sound it is 'culturally bound'. Transferring directly into another culture is not possible (pg. 52). The authors advocate a shift in thinking in order for transformational positioning to occur. The authors present two frameworks to enable Western and Māori indigenous knowledge systems to interact and blend through careful and guided theorising that in turn informs practice.

How is the article helpful to the topic?

The article informs our understanding of the He Awa Whiria – Braided Rivers conceptual approach.

9. Macfarlane, A Blampied, N., & Macfarlane, S. (2011) Blending the clinical and the cultural: a framework for conducting formal psychological assessment in bicultural settings in the *New Zealand Journal of Psychology* Vol. 40, 2, 2011.
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Type: Journal article

This article discusses how the intersect occurs between psychological assessment and cultural considerations. The authors suggest that it is important for professionals to consider the relevance of the cultural background of those who are being assessed. They say that if it is accepted that more authentic assessments will allow professionals to make more informed decisions then this will lead to better outcomes for clients. It should then be acknowledged 'that there are ethnically linked ways of thinking, feeling, and acting that are acquired through socialisation' and that this is necessary. It should then follow that culture should be taken seriously: The authors argue that this makes it possible to consider assessment in a more multi-faceted way as opposed to a more categorical (as diagnosed/labelled or otherwise) way, but as something that is within their range of common experience. This makes thinking more complex but can lead to better understanding and insights where cultural considerations are concerned and where these considerations 'intersect with assessment processes' (pg. 6).

How is the article helpful to the topic?

The article advocates for a blending process framework as it applies to psychological assessment i.e. psychological knowledge. Understanding the importance of cultural considerations and family understandings that are influenced by worldviews and cultural context.

10. Mercier, O., Stevens, N., & Toia, A. (2012). **Mātauranga Māori and the Data-Information-Knowledge-Wisdom Hierarchy: A conversation on interfacing knowledge systems.** MAI, 1(2), 102–116.
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Type: Journal article

This paper discusses and explains the use of the Data Information Knowledge Wisdom (DIKW) pyramid to describe how mātauranga Māori can interface with the DIKW model. The DIKW model has been attributed to R.L Ackoff (1989), and has been described as a model which originates from and has a direct relevance to information systems and knowledge management (Mercier, et al 2012). This model can be used to:

- explore conversations between mātauranga Māori and science
- contrast different ways of seeing from a cultural perspective other than a dominant western perspective
- asks how the DIKW pyramid model can be adapted, with mātauranga Māori as the benchmark and the main driver (Pg. 105).

The DIKW model is a system for pulling together data to produce information which in turn is constructed into knowledge and in some cases contributes to the development of wisdom. The data and information is connected through relationships which give them structure that is then conveyed as knowledge. The authors refute the arguments from other commentators who say that mātauranga Māori with its holistic approach and science with its reductionist approach are incompatible as they are diametrically opposed and conflict with each other. This according to Mercier et al means that they run the risk of missing the collaborative potential of these knowledge approaches.

How is the article helpful to the topic?

The article illuminates ways in which knowledge hierarchy systems, such as the DIKW, can be understood and expanded upon in the context of te ao Māori knowledge. It also supports the authors claims that te ao Māori knowledge can be used to explain the world.



11. **Massey, A., & Kirk, R. (2015) Bridging Indigenous and Western Sciences: Research methodologies for traditional complementary and alternative medicine systems, SAGE Open, 5(3). doi:10.1177/2158244015597726**
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Type: Article

This article discusses emergent western methodologies which are compatible with indigenous knowledge and worldviews by exploring the interface between traditional, complementary and alternative medicines (TCAM). The authors describe the use of a narrative synthesis to identify and evaluate methodologies that are effective when applied to various healing approaches. A further outcome of the article has been the ability to consider the potential for transference of findings between distinct knowledge systems (pg.3). This has illuminated further insights and understandings from within indigenous knowledge and has contributed towards better understanding of TCAM. The authors acknowledge that narrative synthesis explores the complexity between epistemology, methodology and practice. They also acknowledge the tensions that follow for researchers, in particular when trying to consider and balance authentically diverse and lived realities of indigenous groups when they are measured against the conventions and rationality of western science research protocols (Ahuriri-Driscoll, 2014; Ritenbaugh et al., 2008).

How is the article helpful to the topic?

This article is helpful as it reminds us that development of research methodologies can support and acknowledge better understanding of indigenous knowledge where and when relevant. They can also be used in the exchange of information between knowledge systems but also reminding us that knowledge needs to be analysed and interpreted within its own true context in order to be meaningful.

12. **Mazzocchi, F. (2006). Western science and traditional knowledge. Despite their variations, different forms of knowledge can learn from each other. European Molecular Biology Organisation 2006, retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1479546>**

Type: Online article

This article discusses Western scientific knowledge and traditional indigenous knowledge within the context of biodiversity and environmental sustainability. Mazzocchi argues that traditional indigenous knowledge has provided indigenous peoples with the ability to protect and sustain their biological diversity over many centuries. It is this knowledge that contributes to their cultural identity as well as their social integrity and recognises their close inter-relationship with nature and the environment. There is a growing interest in the wisdom of traditional indigenous knowledge of biodiversity from the wider international community. Indigenous knowledge is recognised as being a rich source of knowledge to be tapped into. However, as Mazzocchi points out, these systems of knowledge and sensemaking are diametrically opposed to each other. Western science and culture has held a dominant position for some years in the modern world. Its ideas, conventions and methods have been imposed on traditional indigenous knowledge. The notion that Western science should be the only relevant arbiter of knowledge validation would mean the loss of much of our cultural heritage particularly where there is a global movement towards knowledge homogenisation. Knowledge can only make sense if it is considered within it's own cultural context.

Finally, Mazzocchi advocates that a move towards dialogue is required whereby there are common principles that are shared by all participants in the process. He states that the various levels of diversity are a reality of different knowledge systems but also a necessary condition for proactive dialogue. This then helps us to recognise the uniqueness of each knowledge system.

How is the article helpful to the topic?

This article helps us understand the importance of the diverseness of knowledge systems and how this contributes to their unique positioning in terms of how the world is viewed and how to make sense of it. This in turn is what can lead to different insights and innovation in knowledge making.

**TABLE
03**

Adapted from Mazzocchi (2006) showing fundamental differences and approaches between Western Science and indigenous knowledge

Traditional indigenous knowledge	Western science
Intuitive	Analytical
Holistic	Reductionist
Spiritual	Positivist
Sacred	Materialist
Subjective	Objective
Qualitative quantitative	Quantitative
Oral transmission	Academic and literate transmission
Context-driven, dependent on local conditions (Nakashima & Rouè, 2002 cited in Mazzocchi 2006)	Isolates objects of study into controllable experimental environments
Connected to nature	Disconnected from nature
Circular multidimensional	Linear



13. Mila-Schaaf, K., & Hudson, M. (2009). **The interface between cultural understandings: negotiating new spaces for Pacific mental health.** *Pacific Health Dialog*, 15(1), 113–9. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/19585741>
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Type: Journal article

This article discusses the concept and use of the negotiated spaces model in relation to realigning Pacific indigenous models of care and cultural understandings of mental health and illness and dominant Western mental health approaches of the bio-psycho-social. This model was developed by Professor Linda Smith et al and describes the interface between worldviews and knowledge systems. The negotiated space is described as a structured, purposive space created to confirm relationships, engagement and knowledge exchange. Mila-Schaaf and Hudson advocate that, in order to understand beliefs, ideas and values that influence and inform the behaviours and experiences of Pacific peoples in terms of mental health and illness, there is a need to understand the resultant indigenous Pacific knowledge traditions that underpin them. The authors state that the negotiated space creates a relationship of 'va' between cultural knowledge systems. For Pacific people the 'va' refers to the space between people and allows relationships to be encountered and established.

How is the article helpful to the topic?

The article is helpful to our topic as it demonstrates the usefulness of the concept of the negotiated space on a number of different fronts. For instance, the negotiated space provides a specific space to discover insights into Pacific indigenous communities where Pacific mental health and illness are concerned, to theorise and analyse within the acceptance of cultural knowledge as well as cross-culturally, to retain and maintain the relevance of Pacific cultural knowledge within an environment of on-going change and challenge.

14. **Royal, T, C. (2012). Politics and knowledge: Kaupapa Māori and mātauranga Māori. New Zealand Journal of Educational Studies, 47(2), 30–37 Retrieved from <http://search.proquest.com.ezproxy.waikato.ac.nz/docview/1316203532/abstract/13FF870A47F1DAAB9B5/4?accountid=17287\files/533/Ahukaramu and Royal -2012-Politics and knowledge Kaupapa Māori and matauran.pdf\files/407/4.html>**
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Type: Journal article

According to the author of this article there are a number of views that proliferate about the terms mātauranga Māori and kaupapa Māori and that while they may overlap, they are not the same. The article discusses the distinctions between mātauranga Māori and kaupapa Māori as the distinctions are critical to understanding these concepts as well as a background to the development of mātauranga Māori and emergence of kaupapa Māori. Generally these terms are used to support activities that will generate beneficial outcomes for Māori as well as give expression to Māori ways of being and doing things that distinguish them from the rest of the population.

How is the article helpful to the topic?

This article is helpful in understanding the differences between mātauranga Māori and kaupapa Māori. It also explains particular nuances with mātauranga Māori. For instance it is simply a term for labelling a body of knowledge. Kaupapa Māori, on the other hand, has been referred to as a popular term used by Māori to refer to a plan of action which leads to the creation of space to give expression to Māori aspirations and certain values and principles (pg.30).

15. **Smith, L., Hemi, M., Hudson, M., Roberts, M., Tiakiwai, S., & Baker, M. (2013). Dialogue at a Cultural Interface: a Report for Te Hau Mihi Ata: Mātauranga Māori, Science & Biotechnology. Te Kotahi Research Institute University of Waikato.**
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Type: Research report

This report is concerned with explaining the research project Te Hau Mihi Ata that is a pivotal piece in examining the interface between mātauranga Māori and science. They were also able to develop and test processes for dialogue to occur in a range of settings. The research team describe the spaces created through the willingness of people to come together to explore and exchange convergent and divergent positions in an environment where mātauranga Māori and scientific knowledge are equally respected as significant systems of knowledge. The research was prompted by the need to engage Māori communities (such as Māori scientists, knowledge holders/ mātauranga Māori experts) in the debate and discussion on new biotechnologies, and how they interact with and impact upon mātauranga Māori including with Māori communities. One of the major results of their research was the development of a conceptual model called Negotiation Spaces.

How is the article helpful to the topic?

The article was helpful to our topic as it gave us insights into the conceptual dialogue model Negotiated Spaces. This contributed towards our understanding of the crucial role that facilitated cross-cultural dialogue plays in bringing different knowledge systems to the interface.



16. Wilcox, P.L., Charity, J.A., Roberts, M.R., Tauwhare, S., Tipene, B., Matua. Kereama, I., Royal. Hunter, R. Kani, H.M., & Moke, P., Delaney (2008). A values-based process for cross-cultural dialogue between scientists and Māori, *Journal of the Royal Society of New Zealand*, 38:3, 215-227, DOI: 1080/03014220809520555.
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Type: Journal article

This article explores the area of cross-cultural dialogue between scientists and Māori communities as a critical component when introducing contentious technologies (such as genetic modification, nanotechnology and xenotransplantation, p.g.216). While non-Māori scientists and Māori have engaged successfully on less controversial issues, there are others who struggle to engage confidently with Māori communities. This often results in miscommunication as well as Māori resistance and lack of acceptance of any potential benefits that might accrue for Māori communities. The article advocates that there is a need for a staged ‘constructive cross-cultural dialogue’ process for scientists and Māori to come together in a space of mutual respect. The process consists of four stages. The first stage introduces the idea of toolkits which are given to each party prior to the dialogue engagement occurring. The aim is to improve understanding of the different perspectives that each will bring to the dialogue space. The second stage describes the dialogue engagement setting between the parties. This includes guidelines around ‘best practice’ (p.g. 218). Stage three identifies the possible range of responses and outcomes that can emerge from the dialogue. Stage four involves monitoring and evaluating the process. The article also introduces the idea of a knowledge intermediary by introducing what they call the Māori intermediary or Kaiwhakarite to assist and help navigate them through aspects of the dialogue process.

How is the article helpful to the topic?

The article helps us to understand the nature and purpose of the staged dialogue process and how they contribute to discussions between scientists and Māori communities.

