Weaving the Mat of Māori and Pacific Learner Success

REPORT ON THE DATA-INFORMED INITIATIVES TO INFORM MĀORI AND PACIFIC STUDENT ACHIEVEMENT PROJECT

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UNIVERSITY OF WAIKATO | June 2022

Ako AOTEAROA

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

Published by
Ako Aotearoa
New Zealand's Centre for Tertiary Teaching Excellence
PO Box 756
Wellington 6140

www.ako.ac.nz
0800 MYAKONZ
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ISBN: Online 978-1-98-856241-4
Print 978-1-98-856242-1

June 2022

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Kupu whakamihi

Mehemea ka moemoea ahau, ko ahau anake.
Mehemea ka moemoea tātou, ka taea e tātou

If I dream, I dream alone.
If we dream as a collective, we can achieve our dream. (Te Puea Herangi)

Aia ho'i, e nāna i ke Akua, Ho'āno 'ia kona inoa.
Aia ho'i, ike aku la au na ali'i apau o Moananuiākea.
E ka po'e ua pau, ua hala oukou, a koe nō na pua.
E ka po'e ola, e kipa mai oukou!
Aloha mai, aloha mai, aloha mai kakou!

Behold, look to God, hallowed be His name
Behold, I know, I see, I feel, all the chiefs of Moananuiākea (the Pacific Ocean).
To our deceased, depart, and know that your children will carry on.
To the living, we welcome you!
Aloha, aloha, aloha to all.

This project reflects the collective commitment to positive change within the University of Waikato for Māori and Pacific students. We are grateful to the many hands, minds and voices who contributed to this research project and allowed us to challenge, adapt, change and importantly to dream about what can be achieved within a system that was not designed for Māori and Pacific learners. We are thankful to Ako Aotearoa and to our colleagues across the University for your support. We especially want to acknowledge Professor Robyn Longhurst, Associate Professor Tracy Bowell, Ms Sonya Breen, Mr Nathan Rahui, Mr Campbell Vette, Mr Greg Middleton, Mr Asheesh Gautam, Mr John Featherstone, Dr Lynne Parmenter, Mr Jonathan Nickerson, Ms Marie-Christine Wells, Mr Alistair Lamb, and Mr Emry Daniels for their contributions to various parts of the project. Above all, we are thankful to our Māori and Pacific students who participated in the project and generously shared their stories to enable the development and production of the teaching and learning resources. We hope we have honoured your contributions and brought to life our collective dream for a better experience for you and for those that will follow in your footsteps.

E rere kau ana nga mihi ki a koutou katoa. Aloha mai kakou. Mahalo piha kakou. Ni sa bula vinaka.

Sarah-Jane Tiakiwai, Keakaokawai Varner Hemi, Krista Henare, Sianiti Nakabea Bulisala and Alison Campbell

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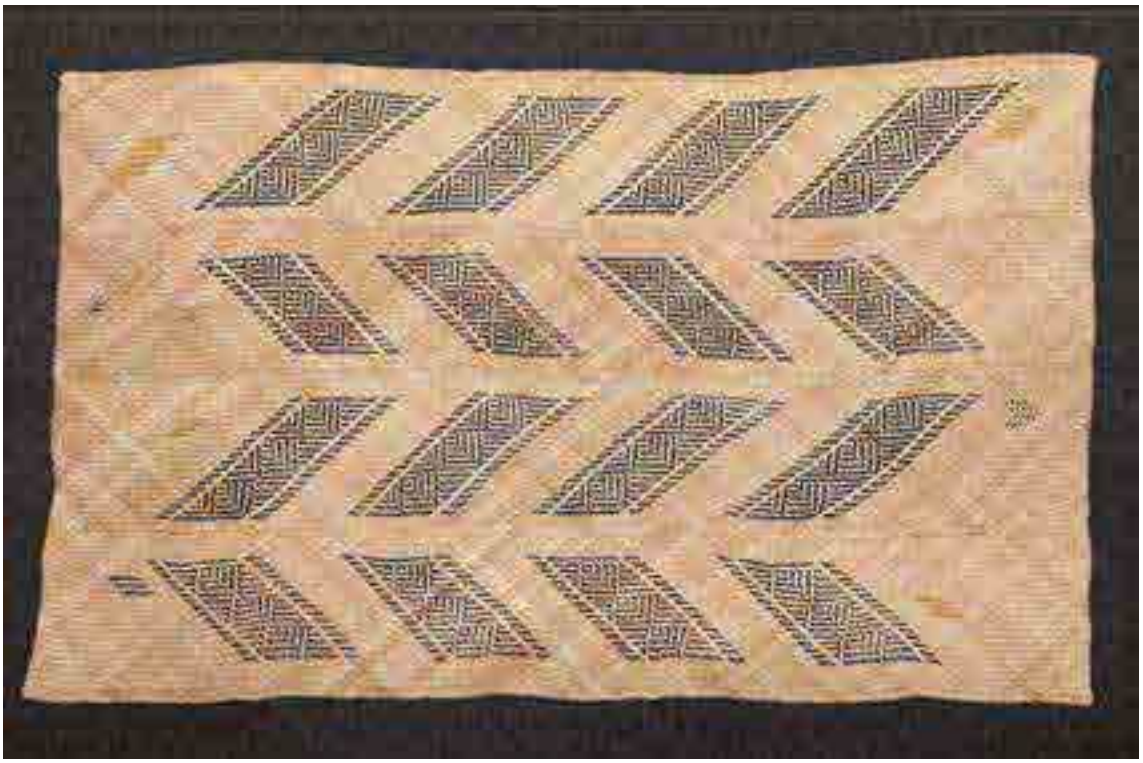
Introduction

Tena koutou. Aloha mai kakou. Ni sa bula vinaka.



At first glance, the picture above seems like an ordinary mat. The palette is apparently simple. The colours are perhaps muted. The chevron pattern might be perceived as geometric, dominant and obvious. At first glance, a few sections look unfinished, perhaps damaged or worn. However, a more in-depth understanding and exploration of this mat uncovers the rich tapestry of stories not always evident to the untrained eye.

Te Whaariki Takapau was woven by master weaver Christine (Tina) Hurihia Wirihana for the late Matiu Dickson, lecturer, lawyer, composer and weaver. Matiu wove law into stories and people together with aroha. He was a teacher and mentor of many. For many of us who are Māori or Pacific, Matiu's classroom in Te Piringa Faculty of Law at the University of Waikato (UoW) was the first time we were taught in a classroom in the way that we were taught at home. With patience, humour and many stories, he imparted knowledge as if it were treasure or something delicious for us to savour – thus creating a safe and familiar environment in which our minds could soar.

Knowing this background, where this mat comes from and who it was made for, allows the colours, patterns and textures that would otherwise be hard to see, come to life. Because this is a mat woven by a weaver for a weaver, we know that these elements are intentional patterns in the weave that tell unique and specific stories. Deeper exploration into the background of this mat reveals that the yellow gold colour is pingao from Matapihi near Matiu's marae. The black almost marks a path to follow and are markers of movement or passages of time. The seemingly rough random patterns on the sides are designed to look as if children had run across the mat and echo the literal pitter-patter of little feet. The longer one looks at it, with greater knowledge, the more the mat speaks of stories and people.

Knowing these stories and not knowing them is the difference between Matiu's mat being just something to sit on, and the art, storytelling, and real people that it represents. The weaving of this mat and the stories it tells are, in some ways, like the approach to research in the Data-informed Initiatives to Enhance Māori and Pacific Achievement project.

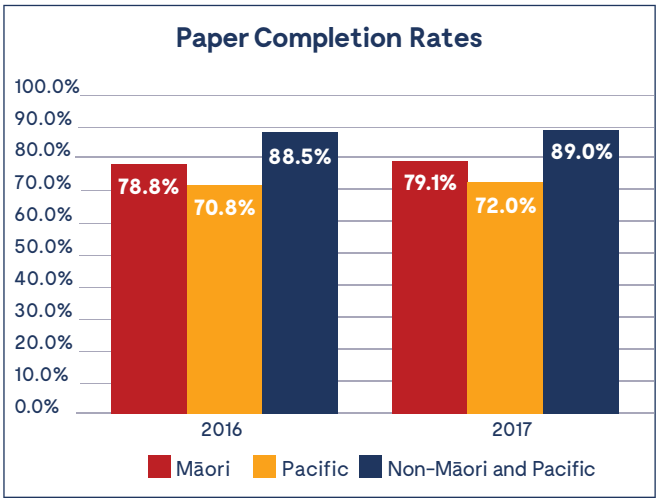
Māori and Pacific student achievement at the University of Waikato

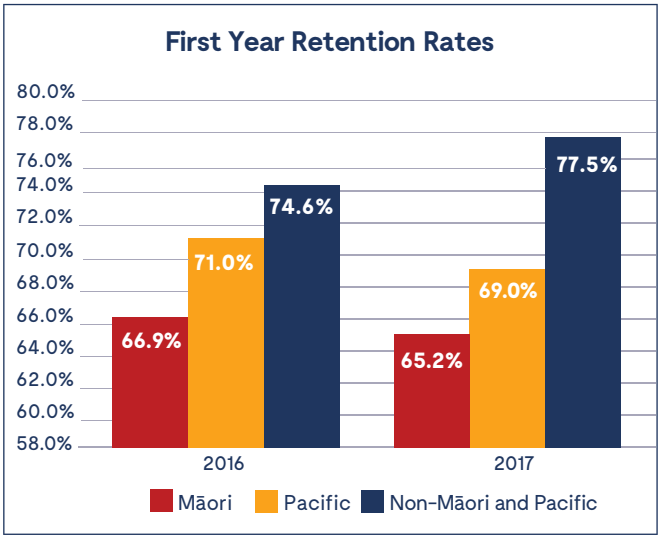
The University of Waikato (UoW) attracts approximately 80% of its domestic students from the Waikato/Bay of Plenty region. The 2018 Census shows that of the combined Waikato/Bay of Plenty region, 26.0% of the population identify as Māori, with 4.1% of the population identifying as Pacific. In 2019, 23.4% of the University's Student Achievement Component (SAC) funded students identified as Māori, with 7.9% of SAC funded students identifying as Pacific.

As with many other tertiary providers, the University of Waikato has previously provided a suite of support services and learning development opportunities for Māori and Pacific learners. These include whakawhanaungatanga-related activities aimed at connecting Māori students, faculty-specific Māori student mentoring, cross-University peer support or tuakana/teina programmes, resources tailored for Māori students, study workshops, wānanga and writing retreats. For Pacific learners, the University has previously provided the Pacific Student Success Coordinator, UniPrep – a comprehensive three-day University induction programme for Pacific students – Pacific faculty-specific mentoring, Pacific Study sessions and groups, a Breakfast Club in The Conch (the Pacific students' space), social media engagement, and student engagement events.

Despite some success, challenges remain between overall student retention, engagement and achievement of Māori and Pacific students (see Figures 1-2 in the next column).

Data from 2019 shows similar gaps and disparities in the completion and retention rates:





Figures 1-2: Paper completion rates and first-year retention rates for Māori and Pacific students at UoW.

As an institution, we can examine the effectiveness of particular activities in an ad hoc fashion, but these institutional gaps and disparities also raise bigger questions.

2019 TEC Data	SAC Māori	SAC Pacific	SAC Non-Māori/ Non-Pacific
Course Completion	79.0%	70.3%	89.0%
Qualification Completion	50.1%	42.7%	63.5%
First Year Retention	60.1%	68.9%	73.3%

‘Persistent gaps’

Across Aotearoa New Zealand, there are pronounced “ethnic gaps” between Māori and Pacific and non- Māori, non-Pacific learners in tertiary participation, retention, and completion. For instance:

- “A much smaller proportion of the Māori (6.3%) and Pasifika[1] (4.9%) populations aged 15 and older hold a bachelor or higher qualification than European (14.6%) or Asian (27.2%) New Zealanders” (Ministry of Education, 2010, as cited in van der Meer, 2012).
- Participation rates for both Māori and Pacific cohorts have grown, but largely at the foundation level and, for Māori, primarily via wānanga enrolments.
- “Māori and Pasifika had much lower rates of enrolment in bachelor’s qualifications – 10.3% and 14.3% respectively compared with 20.4% for Europeans” (Ministry of Education, 2016, as cited in Meehan, Pacheco & Pushon, 2017).

These gaps persist even where Māori and Pacific rates rise and correspond with outcomes in other areas of human well-being including health, housing and employment, creating an organic multiplication of inequities (Hemi, 2021). As identified by Ako Aotearoa, “There have been ongoing systemic failures within the tertiary sector to improve Māori and Pasifika learning outcomes … Much is known about the reasons for the lack of parity in achievement, and many strategies have been trialled and implemented, but … there is no significant improvement on a larger scale across the sector” (Ako Aotearoa, 2018, p. 9).

Weaving the mat of Māori and Pacific learner success

The mat we are trying to weave at the University of Waikato to address educational outcomes, disparities and inequities in education for Māori and Pacific learners will weave rich data, stories and experience. Our goal is to use data to be better informed about what works for Māori and Pacific learners and what does not. Data is useful in building a more complete picture of what is happening to students, but student voice and previous research that has already captured the voices of Māori and Pacific experts, educators, students, families and communities can tell us more about why we are getting these outcomes. As we harness data to improve our knowledge, we must not forget the stories already in the mat and the stories being woven in the mat, for the stories are the gold.

This report details our work on this data-informed rather than data-driven project. It discusses how improved data and data analytic capability enhanced our understanding of the literature on Māori and Pacific learner success and the experience of Māori and Pacific learners at UoW. Our research and the report, however, also unapologetically privilege case studies through literature and Māori and Pacific student voices. We lay out the various materials – data, literature and voice – that will form our mat with this in mind, weaving them together in order to achieve better outcomes for Māori and Pacific learners at our university. These learners are the why of this mahi. Their success will create a beautiful pattern in the weave.

[1] The terms *Pacific* and *Pasifika* are both used in this report to refer to descendants of the indigenous peoples of Moananuiākea, the Pacific Ocean, living in Aotearoa New Zealand. We use Pasifika where that term is used in sources. We prefer to use Pacific generally because it is more inclusive of the diverse communities in Aotearoa who share whakapapa and whanaungatanga.

1 | Methodology

'E kore e taea e te whenu kōtahi te whāriki te raranga'

'One strand alone will not weave a tapestry'.
By working together as who we are, we will achieve more. (Mahuta, 2019)

1.1 Aims of the project

This project aimed to:

- develop institutional capability to create cohesive systems, programmes and experiences that are inclusive, culturally-responsive, rewarding and fulfilling for Māori and Pacific students.
- establish teaching and learning initiatives and environments across the university that are informed by detailed data analytics, combined with a rich student voice.

Ultimately, our team hoped to produce research that would have tangible benefits for Māori and Pacific learners, families, iwi, communities and organisations, but also for tertiary institutions seeking to create transformative, institutional change to improve educational outcomes for Māori and Pacific learners. We hoped to provide evidence of and better articulate the impact of data, literature and indigenous voice-informed learning support initiatives on such outcomes.

1.2 'A tapestry': Weaving Māori and Pacific research, values and methodologies

Working with diverse communities, identities, cultures and languages on the same research project has required a carefully woven methodology. This project is underpinned by Māori and Pacific principles, values and methodologies that respect the relationships that we have with indigenous participants and end users, and help us to maintain our integrity as indigenous researchers. To achieve our aims while respecting complex identities, cultures, languages and communities, we applied a weaving methodology rooted in both Māori and Pacific heritage, culture and language. In this weaving, Māori and Pacific elements come together where it is appropriate but also display distinct patterns.

121 Weaving whakapapa and whanaungatanga

Weaving people is easier when we remember what connects us. For the purposes of our research, we recognise the diversity and complexity of Māori and Pacific identity but also the relationship between them as stated in the University of Waikato Pacific Strategic Plan 2021-2025 in the opposite column:

This project is an example of 'working together on mutually agreed kaupapa'.

When we first discussed the project design, we knew we wanted to bring to the fore the distinctive voices and experiences of Māori learners AND Pacific learners – that is, as Māori, Pacific or Māori and Pacific learners. Too often, we have observed that Māori and Pacific are frequently clumped together in research and literature, as if they are one artificial but indivisible word and identity called *Māori-and-Pacific.* This practice ignores the complex and diverse identities and realities of Māori and Pacific learners (Mayeda, Keil, Dansey Dutton & Ofamo'oni, 2014; Theodore et al., 2018; and Waiari et al., 2021), including the increasing numbers of students who are both Māori and Pacific. These complexities increase the need for greater cultural responsiveness in the methodology design.

We are not weavers, but we chose to use weaving as our research methodology, not unlike Linda Tuhiwai Smith (1999), to help us navigate not only distinct and shared cultural beliefs, common values and educational aspirations but also unique and rich differences in research and approaches to Māori and Pacific learners, which creates improved achievement and real success. Weaving is a common practice throughout Aotearoa New Zealand and other parts of Moananuiākea. It also best represents our efforts to be respectful in our methodology towards whakapapa and whanaungatanga, as well as for diverse communities and cultures. Ultimately, our chosen methodology is much like weaving a mat, from selecting and harvesting materials to patterns created and tension applied.

Māori have unique rights in tertiary education including partnership, active protection and tino rangatiratanga under Te Tiriti o Waitangi/ Treaty of Waitangi. Māori and Pacific people share a common heritage of voyaging, wayfinding, knowledge and learning by which they settled Moananuiākea/the Pacific Ocean in one of 'the greatest feats in human history'. They also share common tipuna such as Maui, Hina, Rata, and Tāwhaki. In one sense, being older in that whakapapa, Pacific peoples are the tuakana or older sibling of Māori, but they are not mana whenua in Aotearoa or Treaty partners. An increasing number of Pacific people, however, are also tangata whenua with Treaty rights, having heritage from the indigenous peoples of Aotearoa and other parts of Moananuiākea. Other Pacific peoples, including Samoa, the Cook Islands, Tokelau, and Niue, have complex historico-legal relationships with the Crown in New Zealand. Given the University's special relationship with Waikato-Tainui and the Kīngitanga, the Plan also recognises the close ties between the Kīngitanga and other Pacific peoples and leaders, including the House of Tupou, the royal family of Tonga.

The grassroots efforts of Māori educators to reclaim language and culture in the classroom from the 1970s on have inspired peoples across Moananuiākea to create learner success for their peoples. For many years, Pacific learner success at the University was driven by dedicated Māori champions and allies who worked with Pacific staff, often quietly but also boldly, to achieve Pacific support, spaces, roles, and strategic leadership. This Plan recognises their sacrifices and hard mahi. It also looks forward with hope to the vast potential of both Māori and Pacific peoples at the University to progress and achieve success by embracing the whakapapa and whanaungatanga and working together on mutually agreed kaupapa (University of Waikato [UoW], 2021, p. 2).

122 Aho

In te reo Māori and ʻōlelo Hawaiʻi, aho and ʻaho, respectively, refer to core strands in the weaving. Given the complexities of identity, culture, and language entailed in this project, we considered the following to be our aho throughout the project.

Kōrerorero and talanoa: Dialogue-based relationships

Māori research methodologies often value dialogue and relational interaction. Wananga, for instance, "encourages critical thinking and debate" as well as "the co-creation of both new and inherited mātauranga (knowledge)" (Mahuika & Mahuika, 2020, p 369) through dialogue. Pohatu and Warmenhoven (2007) continue this notion of critical thinking, stating that wānanga provides spaces that enable us "to reflect and be reminded of our place" (p. 120).

Most Pacific research methodologies rely on relational interaction, especially storied knowledge transmission. Vaioleti described his talanoa methodology as "ecological, oral and interactive", "allow[ing] for more moʻoni (pure, real, authentic) information" and "a cultural synthesis of the information, stories, [and] emotions" (Vaioleti, 2006, discussed in Suaalii-Sauni & Fulu-Aiolupotea, 2014). Talanoa is also dialogue-based. Similarly, the faʻafaletui methodology recognises "the various strands of 'talk' that emerge from a talanoa session" (Suaalii-Sauni & Fulu-Aiolupotea, 2014, discussing Tamasese et al., 2005).

Our methodology relies on interactive dialogue between researchers and participants.

Moʻolelo and purakau: Telling one's own story

Our methodology also prioritises the capacity and right of participants to tell their own stories.

Talk is both method and knowledge in various Pacific methodologies. This is apparent in methodologies that literally rely on both, such as tok stori, the Melanesian culture-grounded 'relational mode of communication' that can be used in teaching, leadership or research (Sanga et al., 2018). Tok stori and other methodologies also utilise storytelling to transmit knowledge and to make sense of that knowledge.

Similarly pūrākau are affirmations that "our own cultural narratives...offer legitimate ways of talking, researching and representing" our experiences and our stories (Lee, 2009, p. 8). The opportunity to have our voices as indigenous peoples validated through the sharing and retelling of our own narratives, strengthens our understanding of the challenges facing us and the opportunities to find solutions that are informed by our own knowledges and experiences (Pihama et al., 2019).

Indigenous self-determination and participation

Kaupapa Māori research has been described by Linda Tuhiwai Smith (2015) as "by Māori, for Māori and with Māori". This draws on Graham Smith's (1997) position that being Māori is assumed, where Māori knowledge and practices seek to inform ways in which transformative changes can be made for Māori communities (G. Smith, 1997). This is part of the self-determining agenda that is kaupapa Māori research.

For Pacific people, research, knowledge, data and information will also come from the people

themselves. As Kanaka Maoli historian, Samuel Kamakau, once emphasised:

> *He makemake ko'u e pololei ka moolelo o ko'u one hanau, aole na ka malihini e ao ia'u i ka mooolelo o ko'u lahui, na'u e ao aku i ka moolelo i ka malihini.*
>
> *I want the mo'olelo [story or history] of the sands of my birth to be correct; it is not the foreigner who shall teach me the mo'olelo [story or history] of my people, I shall be the one to teach it to the foreigner (Kamakau, 1865).*

Pacific research guidelines recognise the importance of meaningful and reciprocal engagement, cultural sensitivity and respect, the significance of Pacific people's knowledge, the need to protect Pacific communities and human dignity (Health Research Council, 2014). These principles are more likely to be observed where Pacific people are able to speak for themselves and tell their own stories.

By indigenous, for indigenous and with indigenous is essential to the integrity and strength of our data and findings.

Research as shape and power

When indigenous voice and mo'olelo are given their rightful place, research will help to 'shape' it and 'give' it 'power'. Thus, research:

> *"is not the ultimate source of our voice; the ultimate source of our voices is our ea - our breath, our life, our sovereignty. But the research shapes and can give power to our ea. It can collect and help us make sense of otherwise unnoticed pieces of our collective experience" (Goodyear-Ka'ōpua, 2016, p 13).*

In *ako* exchanges of knowledge, the boundaries between researcher, participants and end-users blur as the researcher becomes the learner and both have a concern for the end-users. Māori and Pacific people may be seen as experts and guardians of insider knowledge, or even sacred knowledge where access may be possible but needs to be carefully negotiated (Sanga & Reynolds, 2020). Various Pacific methodologies, including Thaman's (1997, 2003) kakala methodology, prioritise the gathering of the talk, stories and knowledge of Pacific participants over the expertise and academic qualifications of the researcher. Pacific research methodologies generally seek to maximise and nurture the va between people – or to teu le va – that is, create "directive action" through "optimal relationships", "collective knowledge generation" and focusing on outcomes (Airini et al., 2010). The researcher, Māori, Pacific or not, retains a responsibility for the cultural safety of participants and for "custodianship", "stewardship" or "guardianship" of the knowledge that has been shared with them. Such responsibility will be "complex" as the result of "relational positionality" (Sanga & Reynolds, 2020).

Our woven kaupapa is one where data, research and initiatives will give shape to Māori and Pacific voice, mo'olelo and purakau, where ways of knowing and doing are evident, where relationships and communal goods are prioritised and where our aroha/aloha, manaakitanga and whanaungatanga is demonstrated.

1.3 Research stages

The project has five main phases that are commented on below. In some cases, these phases have been impacted by the COVID-19 pandemic and subsequent lockdown, learning needs and staff capacity. This has created overlap between phases and other aspects of the project. Notes on the changes to and woven aspects of the methodology are provided below.

1.3.1 Literature review

What works and why? What evidence do we have already for what works? What have Māori and Pacific researchers, learners, families, and communities already told us about what works?

We needed to know what was working well locally (University of Waikato), nationally and internationally. This would inform the design, development, and delivery of programmes for learners and teachers that best support Māori and Pacific students to complete qualifications successfully and be best prepared for their futures. Such studies would be useful in helping us identify what is working for Māori and Pacific

students and why it might be working. These studies would give us a starting place and a certain amount of grounding. We would also be able to see how closely these studies aligned with the experience of UoW students.

A literature review was crucial to ensure that we did not forget what Māori and Pacific researchers, learners, families, and communities have been telling researchers for decades. In our experience, good research and community voice have too often been forgotten by researchers and public bodies. We did not want to neglect an important source of voice and storytelling. For instance, while we continue to need more quantitative data on Pacific learner success (Airini et al., 2010), there is much qualitative research on challenges and potential solutions. This includes consistent messages from students, parents and teachers on continuing challenges – for instance, discrimination in the classroom – and opportunities including increasing Pacific languages and culture in the classroom (Ministry of Education, 2020). Previous literature reviews have also been valuable in identifying key enablers and challenges to success.

Ultimately, our literature review would provide national and international perspectives on what constitutes success for Māori and Pacific people.

1.3.2 Data and learner analytics and tools

What do we know? What can we know? How can we use data tools to improve Māori and Pacific learner success?

To be 'data-informed', we also employed data analytics and tools. The sources of data we could access and our capacity to harness that data increased over the course of the project, allowing us to access rich sources of data.

Data and data analytics

At the beginning of this project, we did not know all the potential data sources that would become available to us. Due to rapid advances in data analytic capability resulting from the University's *Ōritetanga Learner Success* project with the Tertiary Education Commission, which began in 2019, we were able to access richer quantitative and qualitative data on our own learners than the regional and local demographic information we would have previously obtained. As discussed in section 3 below, the newly developed Student Success Dashboard is an early warning system for students who are not engaging. It relies on indicators identified through machine learning[2] applied to enrolment, retention, completion, withdrawals, pass rates and pass rate quality data mined from 15 years of historical data. It has also benefited from qualitative sources such as leaver surveys.

Data-informed versus data-driven

This project is data-informed not data-driven. Previous barriers to implementing change in this field have included (a) weaknesses in collecting and coherently using learner data, and (b) lack of cross-institutional, integrated strategic and operational initiatives. Tertiary initiatives will not be as effective as they could be unless indigenous voices elucidate, contextualise, and qualify the data. Wilks et al. (2018) assert that indigenous communities need to be equal participants in data and methods design to "enable data informed decision making based on high quality data" (Wilks et al., 2018).

Originally, we sought to use the Georgia State University experience (Association of Governing Boards of Universities and Colleges, 2017) as an exemplar that could be adapted and reshaped to ensure proper fit with Aotearoa/New Zealand cultural and educational environments. We aimed to overcome the first barrier by a) ensuring that we had a data-informed understanding of who our Māori and Pacific learner cohort are and b) employing learner analytics to ensure that we monitor student progress in effective and meaningful ways. Like the Georgia State model, our project continues to seek to use targeted, evidence-based approaches to create Māori and Pacific learner success across our institution. Like other data-informed and data-driven projects, we sought to increase our capacity and capability through data.

[2] Machine learning is a development in computer science that "enable[s] a computer program to automatically analyse a large body of data and decide what information is most relevant. This crystallised information can then be used to automatically make predictions or to help people make decisions faster and more accurately" (University of Waikato, n.d.). For more information on the machine learning software that was used for the Student Success Dashboard visit: https://www.cs.waikato.ac.nz/ml/

However, as indigenous researchers we also recognise that data alone is not a panacea for poor outcomes. Nor does it offer a complete picture of complex factors that impact Māori and Pacific learner success. We also recognise that the Georgia State model has largely been applied to the educational achievement of racial minorities in an American setting, while we have the benefit of decades of research specifically on what works for Māori, Pacific and other indigenous learners. While racial justice is often focused on achieving full integration and parity for minority groups such as African Americans, we are mindful that Māori and Pacific peoples sit within different historical, cultural, and legal contexts in education in New Zealand. Māori, particularly, are Treaty partners and have unique rights in education such as tino rangatiratanga, partnership and active protection. We are also mindful that the New Zealand education system, despite its continuing challenges and inequities, is well ahead of the American system in achieving learner success for indigenous students in many respects.

For these reasons and others, this project and initiatives remain data-informed rather than data-driven.

133 Māori and Pacific student voices

What do students think? What have they experienced? What can we learn from them to improve Māori and Pacific learner success more generally?

The design acknowledged that "institutions should continually assess student experience, especially in the classroom, and monitor how changes in institutional action impact student experience" (Tinto, 2012, p 121). Amundsen (2021) agrees:

> *As the term 'student voice' suggests, Indigenous students have legitimate perspectives and opinions, and need to have opportunities for an active role in educational policy development and to practice decision-making (p. 425).*

Similarly, Knight-de Blois and Poskitt (2016) drew on student voice literature in their study of Pacific Island views around effective teaching and learning to emphasise that learners can make important contributions to factors that contribute to their success. In our own experience of working with Māori and Pacific students, we have often witnessed their ability to provide invaluable insights into our understanding of issues, challenges and solutions. We also know that our Māori and Pacific students are eager to contribute to communal outcomes and to the better outcomes for other students. These cohorts of students are often leaders in their own right as well.

Culturally-informed and -responsive methods for gathering student voice include *wānanga* to engage with Māori learners and *fono* to engage with Pacific learners. These methods encourage decolonisation of the methodology, open dialogue and storytelling (as described below). The purpose of the wananga and the fono was to allow students to tell their own stories in a culturally-safe environment. These sessions were separated into Māori and Pacific cohorts to be as culturally-safe and conducive to genuine discussion, ako and talanoa as possible. These forms of knowledge-gathering and -sharing required robust two-way dialogue in a high-trust environment.

Wānanga

We chose to use wānanga to engage with Māori learners. As a method, the wānanga represents a "dynamic living tradition" which allows for '"seminars", a "series of discussions", [and] a "thought space" (Mahuika & Mahuika, 2020, p. 369). As part of a living tradition, the wananga represented places of learning for the research team where ako learning – that is, both teaching and learning at the same time – could take place. These sessions were conducted by the Māori Student Achievement Manager, Ms Krista Henare, and Mr Nathan Rahui. They provided refreshments, took notes and recorded the sessions on their phones.

Fono

Fono is a Samoan word that, in its simplest form, means 'meeting'. It can refer to an ordinary meeting or a meeting of great importance, such as a gathering of leaders in a field. It is frequently used among Aotearoa Pacific communities to indicate a meeting where feedback and dialogue with Pacific

communities is sought. We chose to use the term fono to indicate a meeting of people where the va would be respected, relationships would be fostered and richer dialogue including talanoa, tok stori and ako would take place. Our fono presumed ako relationships between the research team and the participants where teaching and learning is happening simultaneously. Students were invited to participate in a group session – rather than one-to-one – where they could participate in a hearty two-way talanoa-style interactive dialogue and discussion about educational experiences. These sessions were conducted by the Pacific Student Success Coordinator, Ms Sianiti Nakabea, who also provided refreshments, took notes and recorded the sessions on her phone. Although scheduled for a certain time, the sessions were not constrained by time but prioritised the need for people to share their experiences over the need to finish.

Decolonising the methodology

Using Māori and Pacific values-based methods enhances the decolonisation of the methodology. Wānanga and fono – and the dialogue, storytelling and ako learning which occur through these research methods – are time-tested, culturally resonant, indigenous practices underwritten by fundamental indigenous values. Each relies on aroha/aloha/alofa/'ofa, utu (reciprocity), collective outcomes for the family and community (as in the Fijian word sautu), service and responsibility (as in the Samoan value of tautua or Hawaiian kuleana), and a certain amount of humility (as in the Tongan word fakatakilalo) on the part of the researcher. Wānanga and fono recognise the need to respect, maintain and nurture ongoing relationships between researchers and participants. Each recognises the sacred relational space between people (the Māori wa and Pacific va) and prioritises the practice and value of dialogue (Hemi & Aporosa, 2021).

Privileging Māori and Pacific voice and storytelling while using data and data analytics to shape and give it power, is also an important step in decolonising the research. The privileging of indigenous voice and storytelling through the literature review (see Section 2), wānanga and fono, is especially important given the inherent power imbalances between Māori and Pacific student cohorts and institutions. Our own performance as an institution and our own metrics of success

must reflect how Māori and Pacific learners measure success to be more equitable.

1.3.4 Data-informed initiative enhancement and development

How can we tailor initiatives using literature, data, learner analytics and student voice to improve Māori and Pacific learner success?

This stage of the research was greatly impacted by the COVID-19 pandemic and subsequent learning needs, pastoral care and staff capacity issues (see section 1.4 below). Lockdown, and then a return to less than normal teaching and learning conditions, necessitated a delay in initiative design and implementation. Two important initiatives, however, were re-imagined or designed anew based on what we saw in the data and what we heard from students. These are:

- An enhanced, culturally-informed Māori first-year initiative, Te Kāhui Pīrere, strengthened through data analytics and student voice.
- A new, culturally-informed Pacific first-year initiative, the Imua Learner Leader Initiative, which complements and learns from Te Kāhui Pīrere, as well as data analytics and student voice.

1.3.5 Cohort tracking and further findings

How is it going and how can we do even better? What evidence can we see that these initiatives are having an impact on Māori and Pacific learner success?

With improved data capability and tools, we have been able to track Māori and Pacific cohorts of students in terms of key indicators including enrolment, pass rates, grade quality (average GPA), retention, and withdrawals – albeit within an unusual year and educational environment. There are clear implications in what we are seeing in our data that build on what we heard from Māori and Pacific students during the wānanga and fono. While the year was unusual (see section 1.4 over), we would argue that it provided rare insights into learner success during a time when learners, staff, families and communities were challenged – and, therefore, a particularly good test of teaching and learning support. While more difficult to quantify, we are aware that the figures that we tracked and compared represent the work of multiple teams and the impact of multiple initiatives.

1.3.6 Learnings and further application

What are some of the lessons that we learned during this project? What work do we still have ahead of us? How will we incorporate our learnings into that work?

From literature, voice and data, several reinforcing learnings emerge. Some of these lessons emerge from the unique COVID-19 educational environment (see section 1.4 below), a situation that has magnified existing disparities and areas of concern, including the digital divide. Other lessons signal ongoing development and further questions about and opportunities to create better outcomes. More initiatives are being developed to explore these questions.

To transform outcomes at an institutional level, it is also important to incorporate what we have learned in our strategic commitments. The University passed the *Pacific Strategic Plan 2021-2025* on 15 June 2021 and is in the process of drafting its next Māori-focused strategic plan,

Draft Te Rautaki Māori o Te Whare Wānanga o Waikato 2022-2027 (Māori Advancement Plan). These plans incorporate many learnings from this project.

1.4 Tension: The impact of unforeseen events on research

Those who weave know that the amount of tension applied during weaving – the way one holds the strands tight and taut or loose at a particular moment – is crucial to the resulting patterns and integrity of the mat. A number of factors have been like applying tension at particular moments in the weaving of our mat, including the COVID-19 pandemic and subsequent socioeconomic impacts.

Although New Zealand has been remarkably blessed, our Māori and Pacific learners were impacted by the COVID-19 pandemic that has gripped the world's attention since March 2020 and caused, among other impacts, the closures of schools and education systems and rapid transition into online learning. The United Nations Secretary General, António Guterres, has called the impact of the pandemic on the right to education "a generational catastrophe" (Nichols, 2020). Across the world, the often-disproportionate impact of economics, lockdown and other factors on minorities, girls and women, students with disabilities, and students in poverty (United Nations, 2020) is evident. Across the spectrum of the student journey, we have seen ample evidence in Aotearoa New Zealand from primary, secondary, and tertiary schooling of the digital divide between Māori (Digital Government, 2021a), Pacific (Digital Government, 2021b) and other cohorts and how a lack of digital devices and access immediately forecloses learning. As if in a developing country, Māori and Pacific learners and their families have had to choose between studying and working to help make ends meet, so much so that certain tertiary institutions created wage and accommodation subsidies to keep these groups in study. This catastrophe displays many aspects of cumulative and compounded discrimination and inequity drawn to particular identities.

As a university, we went from completing Orientation and beginning teaching and learning support in Trimester A 2020 to having to answer the most basic questions about the well-being of our staff and students. Our priorities in that moment included the following:

- To provide a healthy and safe environment for students to learn.
- To support Māori and Pacific students during this unique challenge.
- To promote and maintain engagement and a sense of community amongst students and staff.
- To weather disruption to, and continue to provide, effective teaching and learning support services despite COVID-19.

We were aware that Māori and Pacific students needed:

- Accurate and up-to-date information.
- To stay in touch with peers and student groups.
- Ready access to teaching and learning support staff.
- Reliable technology and internet connection.
- Aroha/Aloha, professionalism, kindness, and reassurance.

As lockdown became apparent, the DVC Māori team rapidly responded by creating a survey which asked students about potential IT issues, including their access to digital devices and internet. The survey also gave them the chance to provide additional information about their concerns. This survey was emulated and adapted to Pacific learners by the Pacific Student Success Coordinator. She also followed up that survey with a survey on additional needs such as employment, health and family needs. Respondents in all three surveys were surprisingly open and honest about their concerns going into lockdown. As New Zealand went into Alert Level 4 and lockdown, many Māori and Pacific students were unsure of how they would meet the challenges of study, work and family, but the Māori and Pacific support teams had real-time information about those challenges that could be used to tailor teaching and learning support.

During lockdown, teams from across the University worked together to personally call every student to see if they were okay and ascertain needs. During our calls we heard from Māori and Pacific students who were worried about the necessities of life, working while studying, caring for family, teaching

children while studying from home on limited devices and data, and other real-life concerns (see survey findings below in section 3). Digital inclusion and pastoral care issues were pronounced. For instance, we worked with a local Pacific health and social services provider to get food to students and others in need, while helping some students access mental health services and couriering laptops to other students.

The pandemic also impacted project design and progress. The initial rounds of our wānanga and fono had been held in face-to-face settings appropriate to cultural values and settings. It was culturally-appropriate to come together to dialogue and talk through ako and talanoa, to share food. COVID-19 restrictions, however, meant that we were required to move the final rounds of wānanga and fono into Zoom where technical difficulties and other challenges could potentially impede the kind of culturally safe dialogue needed for both wānanga and fono – and even basic communication. Early in lockdown, some Pacific people questioned whether true talanoa was even possible in a digital space; however, our conversations continued.

As we worked to support our students, progress on the project necessarily slowed. As we adjusted, we were required to innovate.

2 | Literature review

O le tele o sulu e maua ai figota, e mama se avega pe ta amo fa ‘atasi (Samoa).

My strength does not come from me alone but from many.

2.1 Remembering voices and generations

The stories woven into this research project cannot be viewed de novo. From the start, we were determined not to forget decades of research on Māori and Pacific student achievement as we also sought to be data-informed and to listen to our students. The literature crosses generations and communities to provide rich insights into what works for Māori and Pacific learners. Common as well as distinct themes and patterns in Māori and Pacific learner success in tertiary education can be drawn from these studies. Ultimately, our literature review focused on national and communal perspectives of what constitutes success for Māori and Pacific people.

2.2 Learner success

Learner retention is an increasing focus of attention in higher education (e.g. McKenzie, 2005; Tinto, 2012, 2016; Zepke & Leach, 2005). In particular, the tertiary education outcomes of learners from ethnic minority communities that are characterised as socially deprived have become a focal point for societies across the world looking to higher education as a means of helping to reduce inequities (Zepke & Leach, 2005; Laude, Kaschner, Alvarado & Connerat, 2017; Meeuwisse, Severiens, & Born, 2010; Teevale & Teu, 2018). In Aotearoa New Zealand, there are ongoing concerns about the 'ethnic gaps' between Māori and Pākeha learners and between Pacific and Pākeha learners in relation to the three intersecting issues of participation, retention, and completion of tertiary courses (Ministry of Education & Ministry of Business, Innovation and Employment, 2014; New Zealand Productivity Commission, 2017; van der Meer, 2012; Horrocks, Ballantyne, Silao, Manueli, & Fairbrother, 2012; Teevale & Teu, 2018; Tertiary Education Commission, 2012). For example, "[a] much smaller proportion of the Māori (6.3%) and Pasifika (4.9%) populations aged 15 and older hold a bachelor or higher qualification than European (14.6%) or Asian (27.2%) New Zealanders" (Ministry of Education, 2010, as cited in van der Meer, p. 1). Although participation rates for Māori and Pacific learners in tertiary education have grown in recent years, this trend has been largely concentrated at the foundation levels (New Zealand Productivity Commission, 2017; Benseman, Coxon, Anderson & Anae, 2006; Scott, 2005; Teevale & Teu, 2018), and for Māori this has been primarily through wānanga enrolments rather than through mainstream tertiary providers (Durie, 2005). Thus, "Māori and Pasifika had much lower rates of enrolment in bachelor's qualifications – 10.3% and 14.3% respectively compared with 20.4% for Europeans" (MOE, 2016, as cited in Meehan, Pacheco, & Pushon, 2017, p. 6). It is hardly surprising that the New Zealand Productivity Commission (NZPC) should conclude that "The tertiary education system underperforms for Māori and Pasifika students. These groups experience persistently worse tertiary education outcomes than other students" (2017, p. 277).

Boosting the achievements of Māori and Pacific tertiary learners is a key objective for the Ministry of Education (MoE) and the Tertiary Education Commission (TEC), reflected in the identification of Māori and Pacific as priority groups in the *Tertiary Education Strategy 2014-19* (MoE & MBIE, 2014). For example, the *Pasifika Education Plan 2013-2017* (MoE, 2013) articulated a vision of Pacific learners participating and achieving at all levels on at least a par with other learners; and tertiary providers now face financial penalties if they fail to attract and retain sufficient numbers of Māori and Pacific students through to the completion of their degrees (Strathdee, 2013). Such initiatives reflect the government's recognition of the important role that Māori and Pacific tertiary graduates will play in contributing to New Zealand's future social and economic success. With Māori constituting 15% and Pacific people 7.4% of the nation's population (Statistics New Zealand, 2014, as cited in Teevale & Teu, 2018), it is essential to facilitate better outcomes for Māori and Pacific tertiary learners. Doing this requires not only an awareness and understanding of the key factors that help and hinder the success of these groups, but also the use of data-informed teaching initiatives and pedagogies to enhance student learning.

2.3 Māori and Pacific tertiary learners: Recognising heterogeneity

While Māori and Pacific learners are sometimes lumped together in discussions of underachievement in the New Zealand education system, it is important to note key differences between the two groups. As tāngata whenua, Māori are in partnership with the Crown which, under the principles of New Zealand's founding document, the Treaty of Waitangi, is obligated to give equal rights to and support the aspirations of Māori. As Henley (2009) points out, "State educational organisations have a duty to provide programmes which actively structure equity provisions to meet the learning needs of Māori" (p. 208). Similarly, the *Tertiary Education Strategy* requires that "TEOs must enable Māori to achieve education success as Māori" (MoE & MBIE, 2014, p. 7).

Pacific learners are also an equity group targeted by government, as a result of New Zealand's special relationship with Pacific Islands nations. Migrations from Pacific nations such as Samoa, the Cook Islands, Tonga, Fiji, Niue and Tokelau have resulted in the nation's current Pacific population comprising those who are New Zealand-born and those who have more recently emigrated from the Islands. Despite this, most literature discussing Pacific tertiary learners fail to make a distinction between learners who have experienced the New Zealand pre-tertiary education system (including students from the Cook Islands and Niue, which administer NCEA at secondary school) and learners

who enter a New Zealand tertiary institute directly from a Pacific Island nation[3]. Given that some articles refer to their NCEA performance, the discourse around Pacific learners tends to rest on an assumption that this category constitutes domestic students with some prior experience of New Zealand schooling.

2.4 Extra-institutional factors impacting on learner success

Several subthemes related to socioeconomic status recurred in the literature: the financial burdens of undertaking tertiary study; being the first in the family to enter university; and the influence of whānau/family. These three sub-themes flesh out the lived realities of learners endeavouring to succeed in their tertiary education whilst grappling with limited financial resources and minimal (Western) cultural capital. Recent data show that both Māori and Pacific communities experience greater unemployment, lower incomes, and lower levels of home ownership compared to other New Zealanders (MBIE, 2015 & Statistics New Zealand, 2014b, as cited in Theodore, 2018; MBIE, 2022; Treasury, 2018), so that their over-representation in the low-income population makes it difficult to separate ethnicity effects from income effects (NZPC, 2017). Prior educational experiences also have a significant impact on performance and retention at tertiary level.

[3] An exception to this is the study by Teevale and Teu (2018) who exclude international students from their sample. The review by Alkema (2014) on *Ako Aotearoa-supported research projects on Pasifika learner success* also emphasises the diversity within the 'Pasifika learner' category.

2.4.1 Socioeconomic status

In one of the few quantitative studies identified during this review, Meehan et al. (2017) found that socio-economic status (SES) was the second largest contributor to the retention and completion gap between Māori and Pākeha tertiary students, with first-year pass rates being the largest contributor. This study followed a population cohort born between 1990 and 1994 from school through to young adulthood, aiming to assess the relative contributions of prior academic performance, SES, and parental education to current ethnic gaps in higher education outcomes. The statistical techniques they applied allowed Meehan et al. to assess the impact on performance when eliminating the effects of these three variables. Two findings stand out:

> *If Māori had the same characteristics as the European population, the Māori-European gap would reduce but not be entirely eliminated in terms of participation, retention, and completion rates.*
>
> *If Pasifika had the same characteristics as the European population, this would raise their participation and retention rates to a level above their European counterparts. However, the lower completion rates among Pasifika relative to Europeans cannot entirely be explained by differences in observed characteristics. (Meehan et al., 2017, p. 30)*

Thus, disparities in SES play a significant role in the tertiary outcomes gap between Māori and Pacific learners versus Pākeha learners. However, as some studies (Mayeda et al., 2014; Luafutu-Simpson et al., 2015; Millward, 2011, as cited in Chu et al., 2013) demonstrate, this long-standing disparity does not automatically condemn Māori and Pacific learners to inferior outcomes. On the contrary, some learners used this disparity to motivate themselves:

> *Numerous participants were keenly aware of neo-colonial disparities existing in years past and present that had adverse impacts on their families; this translated to achievement motivations grounded in appreciation for familial sacrifices made through times of racial discrimination, or paving the way for younger family members who lacked adequate support. (Mayeda et al., 2014, p. 176)*

2.4.2 Financial burdens of tertiary study

Multiple studies indicate that limited financial resources exert a major impact on the participation and retention of Māori and Pacific learners in tertiary education. Often, such learners must confront the prospect of leaving their studies to financially support their families (Benseman et al., 2006; Malcolm, n.d.; Luafutu-Simpson et al., 2015). Drawing from the findings of the ongoing ten-year Graduate Longitudinal Study New Zealand (GLSNZ) project, Theodore et al. (2017, 2018) report that, of the 626 Māori and 365 Pacific participants in the study, 16.3% of Māori and 21.3% of Pacific respondents identified financial issues as a significant barrier to completing their tertiary qualifications. Financial concerns included high tuition fees, paying for childcare while studying, and difficulties in getting financial assistance if studying part-time. The struggle to balance employment and study commitments was mentioned by 15.2% of Māori and 12.5% of Pacific participants (Theodore et al., 2017, 2018). Taylor et al. (2017) surveyed the first-year experiences of law students at the Universities of Auckland, Waikato, and Canterbury and found that the strain of financial difficulties featured far more prominently in Māori and Pacific (41% and 37% respectively) than for other ethnicities (Chinese: 5%, Indian: 25%, Pākeha: 24%). Almost one in two Māori students referred to the difficulties of balancing study and employment commitments (p. 1055).

Financial concerns can shape not only participation and completion rates but also students' choice of courses and programmes. For example, Wisely (2009, as cited in TEC, 2012, p. 30) found that financial pressures could predispose Māori learners toward "less costly lower-level courses that take less time to complete, rather than higher-level programmes of study". The cruel irony is that the financial strain that compels some learners to abandon their tertiary studies midway through is compounded when they fail to complete their programmes:

> *Many participants were somewhat bitter that they had been forced to take out student loans to get them through, and this*

feeling was aggravated by the fact that they would still owe money, even if they did not complete their courses. (Benseman et al., 2006, p. 157)

However, participants in other studies (Theodore et al., 2017, 2018; Luafutu-Simpson et al., 2015; Mayeda et al., 2014) perceived the acquisition of higher education qualifications as the gateway to generating better future life opportunities. This provided them with the necessary motivation and determination to complete their studies, despite the financial struggles they encountered along the way. As a participant stated in Luafutu-Simpson et al. (2015), "I think if I end up in a factory that's where my parents were and my parents come here to give me a better future so if I end up in a factory that's not doing them justice" (p. 21).

2.5 The influence of whānau, aiga and history

Not surprisingly, numerous studies have found that Māori and Pacific learners consistently identify whānau/families as the most important factor in enabling their success in their tertiary studies (Anae et al., 2002; Chu et al., 2013; Mayeda et al., 2014; Benseman, 2006; Theodore et al., 2017, 2018; TEC, 2012; Luafutu-Simpson, 2015; Taylor et al., 2017; Malcolm, n.d.). The support of family members was by far the most frequently identified factor by participants in both smaller qualitative studies (e.g. Mayeda et al., 2014) and in larger, quantitative studies (e.g. Theodore et al., 2017, 2018). Family support could be rendered in various ways, such as funding the learner's transportation costs to and from campus, offering moral support when learners questioned their self-abilities, allocating quiet study spaces for learners at home, and giving learners time to study by exempting them from their usual household responsibilities. Indeed, whānau support and involvement was specifically identified by TEC (2012) as a key enabler to ensure the successful transition of Māori learners into tertiary education.

Although family support was the most identified factor by Māori (39.3%) and Pacific (46.5%) learners in facilitating their tertiary success, family was also the most cited factor for hindering successful

completion, with 21.3% of Māori and 33.7% of Pacific learners viewing their families in this way (Theodore, 2017, 2018). As previously discussed, the obligation to provide financial support for families sometimes came at the expense of learners completing their tertiary studies (Benseman et al., 2006). However, the challenges of family commitments were not just limited to finances. Participants also discussed issues such as: struggling with unsupportive family members who believed the learners should be working rather than studying; family members who saw no value in higher education; and the difficulties of concentrating on their studies when they had to raise children and care for other family members. Because cultural values dictate that family commitments should take precedence over study commitments (Benseman et al., 2006), learners are effectively grappling with the weight of cultural mores that frame their tertiary education as an individualistic pursuit. Such learners are largely left to undertake their tertiary studies without family encouragement that, over time, may erode the learner's sense of purpose for pursuing tertiary education in the first place.

2.5.1 First in the family to enter university

Another notable finding is the frequency with which Māori and Pacific learners identify themselves as the first in their family to enter university (Mayeda et al, 2014; Chu et al., 2013; Teevale & Teu, 2018; Meehan et al., 2017; Malcolm, n.d., Zepke & Leach, 2005; Taylor et al., 2017; Benseman 2006). In fact, the GLSNZ study reported that an extraordinary 48.4% of Māori

graduates fell into this category (Theodore et al., 2017). Individuals who lack immediate family members with first-hand experience of tertiary study have a limited knowledge pool from which to build realistic expectations about studying at university. From the type of academic skills required, the level of preparation and study habits needed to succeed, to the largely autonomous, self-regulatory environment of universities, the cultural capital that these learners lack creates a sharp divide between them and their more privileged peers who, in witnessing other family members entering university, may largely take their own success for granted (Zepke & Leach, 2005; McKinley & Madjar, 2014; Mayeda et al., 2014). This finding highlights the need for early, targeted advice and orientation programmes for this cohort of learners.

According to McKinley and Madjar (2014), the lack of cultural capital for first-in-the-family individuals places them at a serious disadvantage which, in turn, can wreck their self-belief: "The greater the disconnection, not necessarily of the students' making, the more challenging the transition process which, nevertheless, comes to be embodied in individual students' experiences, as their inability to cope with, or their failure to succeed" (p. 248). That said, some studies (Mayeda et al., 2014; Theodore, 2017, 2018; Luafutu-Simpson, 2015) have found that this very disadvantage – financial challenges and socio-economic disparities – can be transformed into a motivating factor. Participants in these studies indicated that the sheer significance of being the first in the family to enter university, and thus serving as a role model for other family members and the wider community, was a major factor in driving them to persevere and complete their programmes of study, despite the challenges they faced along the way.

252 Impact of prior educational background and experiences

The literature provides strong evidence that Māori and Pacific learners are underachieving in the current New Zealand secondary education system, and therefore begin their tertiary education at a disadvantage. The statistics are fairly grim, with less than a quarter (23.4%) of Māori school leavers (TEC, 2012, p. 14) and less than a third (30.4%) of Pacific (Education Counts, 2010, as cited in Chu et al., 2013, p. 25) leaving school with University Entrance. Multiple studies suggest that Māori and Pacific learners are not being adequately prepared for tertiary study during their secondary education (McKenzie, 2005; Anae et al., 2002; Theodore et al., 2017, 2018; McKinley & Madjar, 2012; TEC, 2012). In a submission to the NZPC, the New Zealand Qualifications Authority (NZQA) contended that information about tertiary education is not provided to Māori and Pacific learners in a timely manner:

> *Information about tertiary pathways often occurs too late, when subject and programme choices have already been made. Some Māori and Pasifika learners are not provided with sufficient guidance and advice on clear pathways and may find themselves enrolled in low-level or foundation programmes. This limits the choice and access to preferred tertiary study* (NZQA, as cited in NZPC, 2017, p. 68)

TEC (2012) therefore recommends that students and whānau receive information in Year 9 or 10 before making subject decisions that may impact on future study choices. Tertiary institutions are also starting to initiate earlier engagement with secondary students in a bid to provide more timely information and guidance. One example is the STEM (Science, Technology, Engineering, and Mathematics) initiative by the University of Auckland, which aims to encourage Year 10 Māori and Pacific students to study maths and science during secondary school to enable access to a wide range of university degrees (TEC, 2012). In this initiative, schools select a maximum of ten Māori and/or Pacific students who show potential in these subjects to attend a series of workshops in a one-day programme. The tutors at the workshops are Māori and Pacific university students studying degrees in those subjects, who function as role models and mentors for the secondary students.

253 Low decile schools

The over-representation of Māori and Pacific in low decile schools is another key factor in examining how past educational experiences impact on tertiary outcomes. For example, a study by Sopoaga et al. (2013) into the Health Sciences

First Year (HSFY) programme at the University of Otago found that 42% of Pacific learners came from decile 1-4 schools compared to 10% of non-Pacific students. School decile was identified as "an important factor in, and arguably a barrier to success for Pacific students in the HSFY programme" (Sopoaga et al., 2014, p. 104). A major reason is that low decile schools may fail to adequately prepare learners for the requirements of tertiary education:

> *The reality is that few secondary schools in New Zealand focus solely on preparing their students for university. Most, especially 'low decile' schools in low-income communities, are also preparing students for entry into the workforce, for work-based training such as apprenticeships in a variety of trades, and for shorter certificate or diploma courses. (McKinley & Madjar, 2014, p. 248)*

This places an onus on the tertiary sector to consider how best to scaffold all new first-year students into learning at this level.

Strathdee (2013) argues that the disproportionate number of Māori and Pacific learners in low decile schools has led to a problematic tendency to conflate ethnicity with deprivation. Critical that educational policy in New Zealand has focused on ethnicity and has remained "largely blind to SES disadvantage" (p. 512), Strathdee points out that "Māori students in wealthy schools perform better than European/Pākeha students in poor schools" (p. 512). The danger of prioritising ethnicity over the effects of SES is that performance and success in the tertiary system become framed in racialised terms of inherent ability, which can result in further inequities. Thus, the *Pasifika Education Plan 2009-2012 and Ka Hikitia -- Managing for Success: The Māori Education Strategy 2008-2012* were two documents produced by the Ministry of Education that Strathdee identified as presenting "the view that all Pasifika and Māori students are disadvantaged" (p. 512). Meanwhile, Pākeha students in low decile schools remain overlooked by government initiatives, even though they grapple with similar circumstances of deprivation as their Māori and Pacific peers (Strathdee, 2013). However, the literature suggests that teaching and learning initiatives that address the problems encountered by one of these cohorts should result in improved achievement by all (e.g. Haak et al., 2011).

2.5.4 The influence of education background on tertiary outcomes

The quantitative study by Meehan et al. (2017) found that academic performance in secondary school plays the largest role by far in shaping tertiary outcomes. While SES and parental educational attainment were found to be important, they have a lesser effect on tertiary success. As discussed previously, the study found that if Māori had the same characteristics as Pākeha students, including prior school achievement, there would remain a gap in terms of participation, retention, and completion that could not be explained by the three variables measured in the study. However, if Pacific students had the same characteristics as Pākeha students, the gap in participation and retention rates would be entirely eliminated but the gap in completion rates would not. Using similar modelling techniques, Cao and Maloney (2017) found that previous educational performance could partially account for, but not entirely explain, observed gaps in tertiary outcomes:

> *We concluded that eliminating differences between the high school backgrounds of Māori and Pasifika minorities relative to their European counterparts (reflected in school deciles, high school achievement results, and university entrance types) would significantly close the ethnic gaps in first-year performance at university. However, eliminating ethnic differences in all measurable factors could explain no more than one-quarter of the observed gaps in course completion rates and letter grades between Māori and Pasifika students and European students. This suggests that three-quarters or more of these current ethnic gaps would persist even if these minority groups had the same personal characteristics, high school backgrounds and university enrollment [sic] patterns of the European majority.* (Cao & Maloney, 2017, p. 23)

These findings strongly suggest the need for interventions by tertiary education providers – informed where necessary by use of data analytics (see below) – to address the gap between Māori and Pacific students, and Pākeha students, in terms of retention and completion.

2.6 Addressing the gap: Actions available to tertiary education institutions

Tertiary institutions may use a range of options to contend with the gap between retention and performance in Māori and Pacific students, on the one hand, and Pākeha students on the other. These approaches can include smoothing the transition from secondary to tertiary education, including bridging programmes; focusing on maximising learner success during the first semester of study; the provision of safe spaces; use of impact of peer mentoring schemes; recognition of the importance of cultural identity; and timely delivery of appropriate support services, among others. The use of learning analytics based on data from learning management systems can inform these interventions, but may well require the provision of Professional Learning Development (PLD) opportunities for teaching staff, given the fact that using appropriate pedagogies can have a very significant, positive impact on the learning of all students and of at-risk groups in particular.

2.6.1 Optimising transitions into tertiary study

The literature is clear about the importance of facilitating a smooth transition for underrepresented learners into tertiary study but, as Teevale and Teu (2018) note, there is little published research worldwide on the transition from school to university for minority students. McKinley and Madjar's (2014) study is a notable exception. One of their most significant findings relates to "just how critical the summer months between the end of the school year and the start of the first university semester can be for many students" (p. 245). While learners who had clear intentions to study at university used these summer months to prepare by applying for courses, scholarships, and accommodation, learners who were less certain about tertiary study lacked confidence that they would achieve university entrance requirements and would wait for these results to be released in mid-January. Their delay in applying for courses, financial aid, and accommodation often compelled them to scramble for second-choice options at the last minute. Learners who were the first in their family to enter university were especially vulnerable over the summer months:

> *The challenge for many of the first-in-the-family students was lack of support and guidance over this critical period. They were no longer at school, and even the most trusted and supportive of their teachers were out of contact. And as yet, they had no connection to anyone at university.* (McKinley & Madjar, 2014, p. 247)

Increasingly, tertiary institutes are recognising the importance of preparatory and orientation programmes to facilitate smooth transitions into tertiary study, especially for 'at-risk' cohorts. TEC (2012) has commented that

> *[ensuring] that Māori learners are socially and academically connected from the outset of their tertiary education journeys can have a key bearing on initial and ongoing experiences and outcomes. Whether Māori learners encounter a culturally relevant, familiar and supportive learning environment is identified as crucial. (p. 85)*

One example of a tertiary institution working to establish a welcoming environment and building peer support for new Pacific students is Victoria University's Pacific Information Day. This annual orientation day for first-year Pacific students, held before the start of semester in February (Chu et al., 2013), introduces newcomers to the Pacific support coordinator, mentors, academic advisers, and various Pacific student groups in an effort to mitigate the risks associated with newcomers feeling isolated and alienated. Similarly, the University of Otago's recruitment processes for Pacific students are spearheaded by 'Mrs A', who not only oversees the Pacific Islands Centre on campus but also establishes relationships with secondary students and their families in Auckland or in the Pacific Islands (Chu et al., 2013). This early

relationship-building gives families confidence that when their family member arrives on campus, there will be someone present to look out for that individual's interests. Indeed, many participants in Chu et al. (2013) spoke fondly of Mrs A as playing a central role in their tertiary success.

262 The role of bridging programmes

Tertiary institutions also use bridging programmes as a means to prepare learners from under-represented communities for successful tertiary study. By equipping learners with the literacy, language, and numeracy skills required for tertiary level study, bridging programmes offer an alternative pathway into tertiary education and thus serve to reduce traditional inequities in access to higher education, often specifically targeting Māori and Pacific adults who lack the necessary qualifications to enter university (McMurchy-Pilkington, 2013). Described as "one of the most effective ways of supporting minority students" (McKenzie, 2005, p. 14), bridging programmes "can be effective in scaffolding Māori learners into tertiary study" (TEC, 2012, p. 36) because of their smaller class sizes and emphasis on supported learning. Curtis et al. (2017), who found a positive association between performance in the bridging programme and first year grade point averages for learners in the Certificate of Health Sciences at the University of Otago, felt that "the decolonised nature of the teaching and learning context" (p. 161) of the bridging programme was central to the achievements of Māori and Pacific learners in that programme. McMurchy-Pilkington (2013), who interviewed just under a hundred Māori students from a range of tertiary providers of bridging programmes, reiterates the point that a crucial element of success lies in the affirmation of learners' cultural identities:

Foundation programmes for Māori learners were unique in that they consciously reinforced students' identity as Māori (May, 2009). The courses were based in Māori tikanga (custom) and pedagogies such as whakawhānaungatanga (relationship building) and tuakana/teina (mentoring), with the teaching reinforcing the interconnections between Māori learners and their whānau. (p. 438)

263 Nurturing first-year success

Studies in New Zealand support research evidence from across the world in showing that a crucial factor in ensuring course completions, is retaining students in their first year of tertiary study (van der Meer, 2012; Chu et al., 2013; Teevale & Teu, 2018; Malcolm, n.d.; Henley, 2009). In fact, Meehan et al. (2017) contend that if Māori and Pacific learners had the same SES, educational background, and parental qualifications as Pākeha learners, the key to closing gaps in tertiary outcomes lies in boosting the pass rates of first year Māori and Pacific learners. Earle (2007, as cited in Henley, 2009) goes further and identifies the first semester of a learner's first year of study as the window of opportunity for supporting learner success. Malcolm (n.d.) recommends deploying "the most pastorally minded and culturally responsive staff" (p. 7) for teaching first-year students as a strategy to reduce attrition rates.

Henley's (2009) study exemplifies the payoffs that come when resources are concentrated into first-year learners. In response to the high non-completion rates of Māori and Pacific learners in her department's two large first year core courses, Tuakana tutorials were established. Māori and Pacific first year students were invited to attend these tutorials, which were facilitated by a tutor of either Māori or Pacific descent. Concerted efforts were made to dispel misconceptions that the Tuakana tutorials were somehow remedial; Tuakana tutors also tutored mainstream tutorials and students were advised that Tuakana tutorials covered the same content and proceeded at the same pace as mainstream tutorials. Henley (2009) reports that the Tuakana tutorials yielded significant results: Māori and Pacific students in Tuakana tutorials were almost three times less likely than their cultural peers who remained in mainstream tutorials to fail through non-attendance, non-submission of coursework, and non-attendance in the final exam. Henley's (2009) observation, that Pacific students were much higher users of Tuakana tutorials than Māori students, of whom the majority chose to stay in mainstream tutorials, bears an interesting correlation with van der Meer's (2012) findings. Drawing data from the Australasian Survey of Student Engagement (AUSSE), which included

a total of 8,378 New Zealand undergraduate responses, van der Meer finds that, compared with Pacific learners, Māori learners in later years are less likely to access student learning support services. The implication is that resources should be concentrated on supporting first-year Māori learners, given that uptake of support services appears to taper off in subsequent years.

However, it is also notable that an increasing body of research shows that changes in pedagogy used in mainstream classes, while benefiting all users, have an extremely positive impact on the engagement and performance of 'at-risk' groups in particular (see Haak et al., 2011, as one example). Thus, a combination of teaching and learning approaches may be valuable, especially where resources are constrained.

2.7 The impact of learning support services

> *[There is] "an important relationship between the level of support rendered by an institution and students' retention and success, and that support plays an even more important role among Māori and Pasifika students" [compared to other learners] (van der Meer, 2012, p. 5).*

Multiple studies show a strong correlation between student success and support services designed specifically for Māori and Pacific learners (Teevale & Teu, 2018; Henley, 2009; Curtis et al., 2012; Tahua-Hodges, 2010; Luafutu-Simpson et al., 2015). For example, Luafutu-Simpson et al. (2015) surveyed the effect of Pacific-centric support programmes across three tertiary institutions in Canterbury and found that pass rates for students aged 20-24 were 86% for support programme participants versus 65% for non-participants; there was a 30% increase in pass rates for support programme participants in 100-level courses; and there was a 31% increase in pass rates for support programme participants who came from decile one schools. However, Teevale and Teu (2018) note that students could also face backlash from their peers about using such services.

There is also a clear pattern of students struggling in their studies being either unaware of the support services available to them, or being reluctant

or unsure of how to access them (McKinley & Madjar, 2014; van der Meer, 2012; Benseman, 2006; Teevale & Teu, 2018; Theodore, 2017, 2018; Chu et al., 2013). By and large, students who struggled in their studies sought help only once they reached a point of crisis whereas students who achieved tended to seek help early (Teevale & Teu, 2018). The reluctance to seek help is not necessarily due to laziness or complacency on the learner's part, but may be culturally-informed. For instance, Theodore et al. (2017, 2018) refer to the notion of "saving face" or being "too whakama" to seek help. Davidson-Toumu'a and Dunbar (2009, as cited in Chu et al., 2013) suggest that in Pacific cultures, the act of asking a question entails some degree of risk since it might imply that the individual was not paying attention or is showing disrespect for the teacher. Fearful that they may be exposing inadequacies in their learning, such learners avoid seeking help and support services. Teevale and Teu (2018) therefore urge tertiary institutions to run a preparatory course that "encourages and normalises help-seeking behaviour, and works to reduce any stigma attached to help-seeking behaviours" (p. 10). Moreover, support services should be proactive in their engagement with students as opposed to expecting students to initiate that engagement themselves (Ross, 2009; Luafutu-Simpson, 2015; TEC, 2012). A good example of the benefits that come with making contact with learners proactively can be found in Te Aotahi, the School of Māori and Indigenous Studies at the University of Canterbury. The School has a system for tracking every piece of coursework for every student, which led to a significant discovery:

> *When the system was operationalised, they discovered that of the approximately 40*

> *percent of first year Māori learners that did not successfully complete first [sic] year of study, about 90 percent of them passed course work that they completed. This highlighted that the large majority of these Māori learners were not failing the course work; rather, they were failing to complete the course work. (Tahau-Hodges, 2010, p. 17)*

This finding suggests that attrition rates could be significantly improved if learners who are behind on their assessments are quickly identified via learning analytics and proactively provided with appropriate and timely support, especially, but not only, in their first semester and year of study.

2.7.1 Other support services

Zepke and Leach (2005) point to the importance of other services provided by tertiary institutions that enable students to commit to their studies, such as child-care, financial aid, pastoral/religious care, English language support, counselling, library support, and health services. Some studies (Sopoaga et al., 2013; Teevale & Teu, 2018) have found a positive association between students living in a hall of residence and academic performance, since residential halls offer multiple opportunities to form peer networks and study groups. Sopoaga et al. (2013) therefore recommend encouraging Pacific students to stay in residential halls, guaranteeing acceptance of their applications into these forms of accommodation, and providing accommodation scholarships for Pacific students. Such strategies "would be relatively easy to implement and likely be a well-placed investment" (p. 105). Luafutu-Simpson et al. (2015) found that Pacific students expressed a need for more financial support in the form of scholarships, and they recommended that learners be made aware of these opportunities on a regular basis. Participants also suggested that secondary school students who are considering tertiary education should be told of scholarship opportunities and other assistance for Pacific students (Luafutu-Simpson et al., 2015).

Notably, some studies (van der Meer, 2012; Taylor et al., 2017) suggest that there is no significant difference between the satisfaction rates of Māori and Pacific learners with their university experiences as compared with learners of other ethnicities. van der Meer reports that the average satisfaction rating given by all students is 72.7% and that, in fact, Māori and Pacific learners recorded slightly higher satisfaction ratings at 74.3% and 73.9% respectively (2012, p. 3). These findings are echoed by Taylor et al. (2017) who found that the responses of Māori and Pacific law students in relation to levels of engagement "were similar to other groups. For these groups, where differences were noted, they were positive in nature. For example, Māori and Pacific were more likely to report receiving extra assistance when they needed it" (p. 1056).

2.8 Institutional change, culture and space

Over the years, the discourse on tertiary student retention has changed from an initial focus on student integration, a framework that highlights the perceived deficits of under-prepared learners, examining the need for institutional adaptation (Tinto, 2016; Zepke & Leach, 2005; Chu et al., 2013; van der Meer, 2012; Curtis et al., 2017). Rather than placing the onus on students to adapt to the dominant culture on campus, institutional adaptation focuses instead on how tertiary institutes cater for the needs of diverse learners. It is underpinned by the principle that "students should maintain their identity in their culture of origin, retain their social networks outside the institution, have their cultural capital valued by the institution and experience learning that fits with their preferences" (Zepke & Leach, 2005, p. 54). Zepke and Leach (2005) and TEC (2012) cite several studies that found an association between students who exhibited a strong sense of cultural identity and improved educational outcomes, including retention, engagement, and help-seeking behaviour. Zepke and Leach suggest that individuals with a strong sense of cultural identity are more inclined to form social support networks based on cultural affinity, which then serve as buffers to any challenges encountered (Zepke & Leach, 2005).

That sense of cultural identity is also linked to the motivation to give back to one's community; the drive to give back to one's people is an important factor in explaining the perseverance of indigenous

and ethnic minority students in tertiary education (Zepke & Leach, 2005; Chu et al., 2013; Theodore, 2017, 2018; Mayeda et al., 2014; Luafutu-Simpson et al., 2015). Ensuring the provision of role models is one way that institutions can nurture this sense of identity.

2.8.1 Role models

A consistent theme in the literature is the importance of a visible Māori and Pacific presence on campus in the form of staff and postgraduate students. The presence of Māori and Pacific academic staff is a source of pride for learners who see them as role models and mentors. Through being recognised as leaders in their particular fields and in their respective ethnic communities, such staff give students confidence in the classroom and in normalising Māori and Pacific culture and values, and establishing a safe and welcoming environment (Theodore et al., 2017, 2018; Mayeda et al., 2014; Benseman et al., 2006; Chu et al., 2013; Teevale & Teu, 2018; Southwick et al., 2017; Curtis et al., 2012). The importance of having members of the same ethnic and cultural community serving as role models seems obvious, and several studies (e.g. McKenzie, 2005; Curtis et al., 2012; Henley, 2009) explicitly state that Māori staff are the most suitable to address the needs of Māori students and, likewise, Pacific staff for Pacific students, as exemplified by this statement from Curtis et al. (2012):

> *Academic support that is culturally appropriate and has a positive impact on Māori student learning means providing Māori appropriate tutors who are Māori, act as positive role models, are connected with Māori students and Māori-specific issues, who know the course content, and who create culturally safe learning environments. (p. 29)*

However, other studies have pointed out that non-Māori and non-Pacific staff also have the capacity to embed culturally-appropriate content into their teaching and to render positive support to Māori and Pacific learners even if they are not insiders of these communities. Hall (2011) conducted interviews with five non-Māori academic staff at Victoria University who were recognised for successfully embedding Māori content and tikanga in their everyday teaching and learning. Hall, who at the time of writing was "the only full time Māori academic developer currently working in a New Zealand university" (p. 68), describes being stretched thin by frequent requests from academic staff who were seeking guidance on how to incorporate more Māori content into their courses. She makes the point that:

> *[when] it comes to teaching Māori content and students, some of the literature is premised on the assumption that Māori academic staff are the most suitable people to teach Māori content and Māori students (Gallhofer, Haslam, Nam Kim & Mariu, 1999; Gorinski & Abernethy, 2007; D. Smith, 1991). If that really were the case it would be problematic because, unfortunately, there are too few Māori academics. (Hall, 2011, p. 69)*

Interviewees in Hall's paper discuss making conscious and consistent efforts to weave in Māori content and tikanga into their everyday teaching, such as having mihimihi at the start of the course, sharing kai, using Māori statistical data and information, incorporating Māori perspectives, and inviting Māori guest speakers. Interviewees suggest that the secret lies in showing a sincere interest in Māori perspectives, without necessarily having to identify as a member of the community (Hall, 2011). Similarly, Ross's (2009) study, which demonstrates the success of peer mentors contacting Māori and Pacific first year students on a proactive basis, revealed that the mentors did not have to be of Māori or Pacific ethnicity, but they needed to demonstrate empathy with diverse cultures and have an understanding of Māori and Pacific culture. The subsequent increase in retention rates reported by Ross (2009) suggests that non-Māori and non-Pacific peers can serve as effective support networks for Māori and Pacific learners despite cultural differences.

Above all, the literature suggests that teaching staff who show genuine interest in Māori and Pacific culture and who set high expectations of learners from these communities, elicit positive outcomes (Benseman et al., 2006; Chu, et al., 2013; Airini et al., 2011; Southwick, 2017; TEC, 2012; Mayeda et al., 2014; Sciascia, 2017; van der Meer, 2012; Greenwood & Te Aika, 2009). This use of role models and

mentors, combined with the provision of dedicated learning spaces, helps to set up and maintain a positive learning environment.

2.8.2 Culturally safe spaces

> *A core component of culturally appropriate and relevant learning environments is an institution's provision of effective, culturally-specific learning spaces and opportunities, such as peer mentoring, to support Māori learners to engage academically confident, and to experience a culturally safe, supportive and familiar learning environment. (TEC, 2012, p. 66)*

There are multiple examples of how culturally dedicated spaces on campus serve as havens for Māori and Pacific learners (Airini et al., 2011; Chu et al., 2013; Luafutu-Simpson, 2015; Curtis et al., 2012; TEC, 2012; Alkema, 2014; Theodore, 2017, 2018). Such spaces in predominantly white institutions have been termed 'counter spaces' (Solorzano, Allen & Caroll, 2002, as cited in Mayeda et al., 2014, p. 174) and represent something akin to a 'home away from home' as culturally-affiliated students congregate and provide each other with support. Mayeda et al. (2014) reported that "because these academic counter spaces were culturally driven, participants saw them as university efforts that valued their Māori and Pacific cultures" (p. 174). The Pacific Islands Centre in the University of Otago provides a particularly successful example of a safe, welcoming environment for learners. With its kitchen, study areas, computers, tutorial rooms, and readily available food to facilitate study group meetings (Chu et al., 2013), students describe it as "a home away from home and a place to be 'Pacific people'" (Chu et al., 2013, p. 69). However, Greenwood and Te Aika (2009) also make the point that such welcoming environments should not be confined to specific spaces but permeate the whole campus.

2.9 Culturally-responsive teaching and learning

While Māori and Pacific learners still face challenges posed by the Eurocentrism of universities (Luafutu-Simpson et al., 2015; Theodore et al., 2017, 2018; Chu et al., 2013; Mayeda et al., 2014; Curtis et al., 2012), there is evidence of an increasing focus on the implementation of culturally-appropriate pedagogies that are enabling to such learners and of benefit to class members with other cultural backgrounds; Hall's (2011) study provides some examples. Others may include the following: actively practising key Māori values such as manaakitanga, rangatiratanga, and kotahitanga; drawing on Māori and Pacific experiences to explain things; using Māori or Pacific humour; using Māori or Pacific languages in lectures and tutorials; giving learners an opportunity to talk about what they are learning; increasing the use of oral-based assessments; and incorporating multiple opportunities for small group learning (Tahau-Hodges, 2010; TEC, 2012; Chu et al., 2013; Airini et al., 2010; Luafutu-Simpson, 2015; van der Meer, 2012; McMurchy-Pilkington, 2013; Curtis, 2012; Mayeda et al., 2014; Alkema, 2014).

For example, research shows that Māori and Pacific learners appreciate and thrive in small group learning environments:

> *The high proportion of comments that point to tutorials as one of the best aspects of how their university engages students in learning provides further evidence that working with other students supports both Māori and Pasifika students' engagement with their studies. (van der Meer, 2012, p. 7)*

Other studies (Luafutu-Simpson et al., 2015; Airini et al., 2011; Greenwood & Te Aika, 2009; Alkema, 2014; TEC, 2012; Zepke & Leach, 2005; McMurchy-Pilkington, 2013) acknowledge the traditional emphasis on communal learning in Māori and Pacific communities and thus the value of employing interdependent learning approaches that are so familiar to these learners. Chu et al. (2013) suggest that collaborative learning opportunities are especially valuable for Pacific students because:

> *Pacific students were low on intrinsic motivation. In other words, their motivation tended to be driven extrinsically by external encouragement, praise and reward. According to Latu, structured learning groups provide this external encouragement in the form of small group*

rewards (praise, support and guidance from other members). (p. 33)

The very process of collaborative learning also serves to foster key Māori values such as kotahitanga and whānaungatanga, since students support each other to ensure that everyone reaches their goals (McMurchy-Pilkington, 2013; Curtis et al., 2012). Moreover, Zepke and Leach (2005) report a wide evidence base for improved student outcomes when students at large – not just ethnic minority students – are involved in some form of academic learning community (see also Haak et al., 2011).

As previously discussed, a mentoring relationship based on the tuakana-teina concept offers opportunities for collaborative learning. Tuakana-teina relationships have a reciprocal dynamic that finds experienced and novice parties willing to teach and learn from each other, underpinned by the concept of ako and mutual respect (TEC, 2012; Tahau-Hodges, 2010). TEC (2012) reports that Māori peer mentors "are consistently identified in the literature as an effective way to help new Māori learners develop a sense of place in the tertiary learning environment" (p. 40). Similarly, 30.6% of Pacific respondents indicated that mentoring relationships and support from tutors enabled them to succeed in their tertiary studies (Theodore et al., 2018). Tahau-Hodges (2010), who examined mentoring practices as a strategy to facilitate Māori learner success, argues that mentoring is effective for Māori because it encourages long-term 'whānau-like' relationships, focuses on the holistic wellbeing of Māori learners, builds capability in learners to give back to their communities, and supports Māori learners to develop their identity as Māori. Luafutu-Simpson et al. (2015), Tahau-Hodges (2010) and Henley (2009) all reported that Pacific and Māori learners involved in mentoring programmes demonstrated significant improvements in their completion and pass rates compared to their cultural peers who were not involved in such programmes.

The use of such active-learning, group-focused learning opportunities has been shown to improve engagement and outcomes for all students, and for at-risk groups in particular (e.g. Haak et al., 2011; Eddy & Hogan, 2014; Freeman et al., 2014; Meeuwisse et al., 2010; Snyder, Sloane, Dunk, & Wiles, 2016). However, these strategies must be implemented consistently and embedded in both the curriculum and programme delivery since one-off, tokenistic gestures achieve minimal success (McMurchy-Pilkington, 2013).

2.10 The wider impacts of nurturing success and the need for PLD

There is evidence that pedagogical interventions intended to enhance success for minority-group learners have positive impacts on the outcomes for all learners. For example, in 2011 Haak et al. studied the impact of using a highly structured flipped-classroom approach with a large in-class component of informal group work on the learning outcomes for students in an Educational Opportunity Programme (EOP). They concluded that "all students benefit, [but] EOP students experience a disproportionate benefit" (p. 1213) from such an approach. Similarly, Eddy and Hogan (2014) concluded that structured interventions "increased course performance for all student populations but worked disproportionately well for black students – halving the black-white achievement gap – and first-generation students…" (p. 453) – a finding also reported by Snyder et al, (2016). Other researchers also note the positive impact of teaching students about the learning process itself and providing opportunities to practise higher-order thinking, on all students (Buntting, Coll, & Campbell, 2005; Cook, Kennedy, & McGuire, 2013; Dang, Chiang, Brown & McDonald, 2018; Sebesta & Speth, 2017).

However, the education practices used by individual teaching staff may vary in the degree to which they contribute to inclusive learning environments, suggesting both the need and opportunity for targeted professional learning development (PLD) in terms of curriculum development; universal design for learning, which is recognised as a valuable and inclusive tool by the secondary sector (e.g. Kerr, McAlpine, & Grant, 2014; Ashman, 2010; Basham, Israel, Graden et al., 2010; Bat, Kilgariff & Doe, 2014; TKI, n.d.); and classroom pedagogy (Beane, McNeal & Macdonald, 2019; Conrad, Johnson & Gupta, 2007). This will have to be addressed if institutions are to meet the expectations of TEC regarding Māori and Pacific success and retention.

2.11 Using learning analytics to enhance success

Learning analytics is increasingly being used as a tool to enhance student retention and success, at both the institutional level and that of individual papers (Dietz-Uhler & Hurn, 2013). Learning analytics allows institutions, staff, and students to make decisions that are informed by data, given that it involves "the measurement, collection, analysis, and reporting of data about learners and their contexts, for purposes of understanding and optimising learning and the environments in which it occurs" (Long & Siemens, 2011). That is, users can gain useful insights about how the teaching and learning process operates and may be enhanced (Bronnimann, West, Huijser & Heath, 2018). The data may be derived from Learning Management Systems (or LMS, such as UoW's Moodle learning management platform), and along with grades, can also include information on how often and for how long students log into their personal LMS; all of which allow for informed predictions about likely performance (Casey & Azcona, 2017; Smith, Lange, & Huston, 2012). Long and Siemens identified a number of benefits of this type of tool, including the fact that it allows institutions to identify at-risk learners early and provide appropriate support in a timely manner (see, for example, its application by the Eastern Institute of Technology in Hawkes Bay: EIT, 2018), thus supporting the continued improvement in student outcomes expected by funders such as TEC (Dietz-Uhler & Hurn, 2013).

Support and interventions are not necessarily solely academic. For example, Smith, Lange and Huston (2012) describe two strategies that were trialled (with appropriate controls) at their institution: outreach designed by staff in various disciplines, which usually included direct, informal telephone contact; and automated emails welcoming students to their papers and encouraging them to log into their LMS pages. The

first provided only anecdotal evidence that those who were reached by phone appeared to do better overall than those who were not. (However, there are some significant caveats associated with this sort of contact e.g., Gasevic, Dawson & Siemens, 2015.) The second found a decrease in 'drop rate' (withdrawal from papers) in those receiving the emails compared to the control group; this difference was statistically significant and appeared to be associated with a marked increase in early logins in the trial group.

Integrating the use of learning analytics with the use of appropriate pedagogies, along with learning and other support services, has significant potential to enhance both retention and student learning success.

2.12 At a national level: Rethinking success and retention

An important point to emerge from the literature is the need to reconsider conventional notions of success and retention and the measures typically used to define them. Te Tari Matauranga Māori (2007) argue that:

> *Especially for Māori, the concept of 'success' or 'achievement' should not be presumed to equate with indicators the education system uses, such as attendance, passing courses or gaining high marks. Students may not define their goals in terms of attending throughout a programme of study (viewed as retention) or the receipt of a qualification (seen as achievement) because they may have alternative objectives. (p. 374)*

Multiple studies have indicated that, for students from underrepresented communities in higher education, 'success' is often perceived in terms of the learner developing themselves so that they are in a position to give back to their community (Luafutu-Simpson et al., 2015; Sciascia, 2017; Mayeda et al., 2014; Chu et al., 2013; Curtis et al., 2012). Ultimately, success is a multifaceted concept that encompasses a range of possibilities, such as the ability to make positive changes, demonstrating positive personal attributes like determination and perseverance, achieving better life opportunities for the future, and undermining negative ethnic stereotypes. The cultural emphasis on whānau and family means that for Māori and Pacific learners, success is also registered in communal terms, inextricably linked to family and community.

> *Success is never just about the piece of paper but also about what the piece of paper represents for their family and for the greater good of their Pasifika community (Luafutu-Simpson et al., 2015, p. 36).*

Similarly, TEC (2012) points out that for Māori tertiary learners the definition of success is, ironically, not determined by the learners themselves:

> *The literature largely leaves the meaning of Māori learner success and desired key short- and long-term tertiary education outcomes unexplored from a Māori perspective. This is a key gap in the research. Where this is discussed, it is primarily to identify that success is about more than just course and qualification completions. Rather, it encompasses learners' progression within the institution, their personal development and growth, and their ability to enhance the wellbeing of whānau, hapū, iwi and their communities. (p. 53)*

Like success, the concept of 'retention' may be ripe for reconsideration and open to being uncoupled from the conventional measure of sustained enrolment until course completion. Te Tari Mātauranga Māori (2007) argues that attrition may not necessarily be as problematic as it is conventionally understood and that "a certain level of dropping out may be inevitable and part of an overall trend towards longer time frames for student completions" (p. 373). Rather than understanding retention in terms of individual course completions, it may be more productive to adopt an overview of the learner's entire educational pathway:

> *it may be time to think about retention more in terms of keeping adults in the education cycle and to accept that it is inevitable that some will not be able to complete a programme or qualification as they originally intended. We argue that*

> *this should be recognised and addressed by making it easier for students to take a break from their studies when there is no other alternative available to them, while at the same time putting strategies in place that will enable them to return at a later date. (Te Tari Mātauranga Māori, 2007, p. 364)*

Certainly, Tinto (1993, as cited in McKenzie, 2005), one of the most influential researchers on learner retention, has suggested that 30% is a common dropout rate for first-year students. The upshot of this is that "some 'attrition' is not necessarily a problem, especially if students return at a later date or have achieved their objectives" (Te Tari Mātauranga Māori, 2007, p. 373). Benseman et al. (2006) adopt a similar position in pointing out that for some learners, "enrolment was seen as an achievement in itself, and one that did not necessarily lead to successful completion of a programme" (p. 155). Te Tari Mātauranga Māori (2007) argue that it may be more productive to concentrate resources on facilitating smooth exit and re-entry pathways for learners: "If students who take a break from their studies do not see this as a problem, then trying to retain them when the odds are against them staying may be counter-productive" (p. 374). However, this is an issue to be determined at the level of governmental policy, rather than in individual institutions, which should be asking what they can do so that more students "want to persist to completion" (Tinto, 2016).

2.13 Current research gaps

There are relatively few studies that examine the impact of interventions designed to facilitate success in the New Zealand context (Alkema, 2015; Chu et al., 2013; TEC, 2012; Tahau-Hodges, 2010). Both Alkema and TEC observe that the majority of projects here have been qualitative studies which need to be supplemented with quantitative studies to confirm that interventions are in fact making a positive difference to Māori and Pacific learners, and to tease out how they do this, i.e. "research that can be translated more fully into every organisation's practice" (Alkema, 2014, p.16).

Another obvious knowledge gap lies in the experiences of international students from the Pacific Islands when they transition from

secondary schooling in their homelands to a New Zealand tertiary environment. The literature largely fails to distinguish between this group of learners and learners of Pacific Island heritage who have already experienced the New Zealand education system before entering university. The experiences of the former group tend to be overlooked as they become subsumed into the 'Pacific' or 'Pasifika learner' category. An examination of the factors that enable and hinder their success may simultaneously enrich existing knowledge about Pacific tertiary learners and reveal common threads with studies of other groups of international students.

2.14 Summary

Our initial analysis of the literature revealed several themes.

First, socioeconomic status, "first-in-family", and parents' educational status are important but not the only extra-institutional determinants of learner success. Students' prior educational history is also important as it contributes to the academic cultural capital that they bring to their tertiary studies. Crucial factors include the following:

- There is a need for early communication – to students in year 9 of secondary school – around what is required for university success.
- If Māori and European populations had the same SES and educational characteristics, the gap in participation, retention, and completion rates would reduce but would not disappear completely.
- If Pacific and European populations had the same characteristics, Pacific students would do better than European students in terms of participation and retention. However, completion rates would remain lower, although the gap would decrease.

This highlights the role of institutional practices, strategies, and policies in boosting Māori and Pacific success.

Second, the gap in tertiary outcomes will be closed by boosting Māori & Pacific success at first-year level – and, more specifically, in the first semester of study. Thus, institutions should focus on supporting first-year learners in particular.

Third, support services should be visible, accessible and have cultural relevance to learners. Institutions need clear, consistent, regular messaging about the nature and availability of all support services in a way that does not single out any one cohort of students.

Fourth, universities should provide a welcoming, supportive environment inside and outside the classroom, in ways that support and reinforce cultural identity (role models, peer mentoring, culturally-responsive learning spaces and pedagogies).

Fifth, many culturally-appropriate pedagogies have been shown to enhance outcomes for all learners (an important point to stress in supporting changes in classroom practices) including: encouraging students to discuss and reflect on what they are learning; oral-based assessments; and multiple opportunities for collaborative small-group learning and assessment. Culturally-appropriate pedagogies also enhance the cultural awareness of students from other ethnic backgrounds.

Sixth, staff will need professional learning development to enable adoption and implementation of these practices and pedagogies (e.g. focusing on curriculum development, universal design for learning, assessment, culturally-responsive teaching practices). Institutions need to adapt, rather than expect learners to do everything in this space. Universal Design for Learning (UDL) is one example of institutional adaptation increasingly used in the compulsory education sector.

And finally, interventions in and out of the classroom should be informed by learning analytics, which can draw data from Learning Management Systems to allow timely identification of students in need of encouragement and support.

Ultimately, a wide range of factors (both internal and external to tertiary institutions) pose barriers to success for Māori and Pacific learners – but can also provide motivation to succeed. These include the influence of whānau/family, socioeconomic disparities, limited financial resources, minimal academic cultural capital, and prior educational history. However, it is clear that drawing strength from cultural identity, forming supportive peer and mentoring relationships, and engaging with culturally specific support programmes are some key strategies available to students for overcoming these challenges. Tertiary institutions clearly have a role to play in securing better outcomes for these learners through a commitment to implementing appropriate, data-informed, culturally-responsive support systems, learning environments, teaching and learning practices; and strategies and policies that establish a safe and welcoming environment where all learners can succeed.

The factors identified in the largely national focused literature is also consistent with what we have heard locally from our own students and what we have found in the data. The literature further explains what we have seen and heard. It provides more of the why of who is here, what happens when they get here, how well they do when they are here, and how well those outcomes align with their definitions and notions of success, individually and collectively. Family, community, the realities of balancing study with family, work and other commitments, the importance of culture and community, belonging, and the importance of evidence-based approaches are once again quite prominent.

3 | Data and learning analytics

Whaowhia te kete mātauranga

Fill the basket of knowledge

3.1 Being data-informed

The analysis and use of student achievement data has been seen as a powerful resource in addressing gaps and disparities impacting Māori and Pacific students in education in Aotearoa for decades (Timperley, 2004). Data continues to demonstrate persistent gaps and disparities between Māori and Pacific learners and other groups (Kenny, 2021). Both quantitative and qualitative research are needed to present a full picture. As noted, there has been a gap in quantitative data in Māori and Pacific research, including research measuring the impact of teaching and learning initiatives for these cohorts (see previous section).

3.2 Rich data

This project draws on rich data and the work of various teams at the University since 2019. During the project our capacity to draw on data has benefited from the various developments. Our approach reflects a number of rich data sources dovetailing together as a result. This includes data obtained from:

- UoW's Ōritetanga Learner Success project with the Tertiary Education Commission (TEC), which combines data with machine learning in a Learner Success Dashboard allowing us to monitor students' progress in near-time.
- 15 years of historical data made customisable through pivot tables available in UoW's MyReports portal including 2019 and 2020 data on pass rates, pass rates quality and similar indicators of success.
- Our university's COVID-19 response including survey data from Māori and Pacific students regarding technology and connectivity, as well as other challenges to study, pastoral care, and learning support.

While COVID-19 delayed the second round of fono and wānanga and had other effects on the project, the pandemic, obviously, had a huge impact on teaching and learning for learners and teachers. As challenges unfolded in real-time, we were also gifted data from various sources, including from Māori and Pacific students. We saw magnified gaps and disparities as students dealt with the challenges of survival as well as the challenges of study, but also success and resilience as they persisted. Richer sources of quantitative and qualitative data have been woven together by design and circumstance. As a result of the Ōritetanga project, we were able to access richer data on our own learners rather than just the regional and local demographic information we would have previously obtained from NIDEA (National Institute of Demographic and Economic Analysis).

3.3 The Ōritetanga learner success project

Ōritetanga – tertiary success for everyone is a Tertiary Education Commission (TEC) initiative focused on ensuring that every learner receives the support that they need to succeed in education, to achieve sustainable employment and lead fulfilling lives. The University of Waikato has partnered with the Tertiary Education Commission to trial the implementation of their TEC Learner Success Framework (see Figure 1 below). The aim is to advance the University's many strategic goals to improve the learner experience and to enhance learner success[4], particularly for Māori and Pacific learners. Our strategies aim to provide an environment where there is a high level of support for all aspects of student achievement and personal growth, extending beyond academic support to include social and cultural experience, financial, physical and mental health.

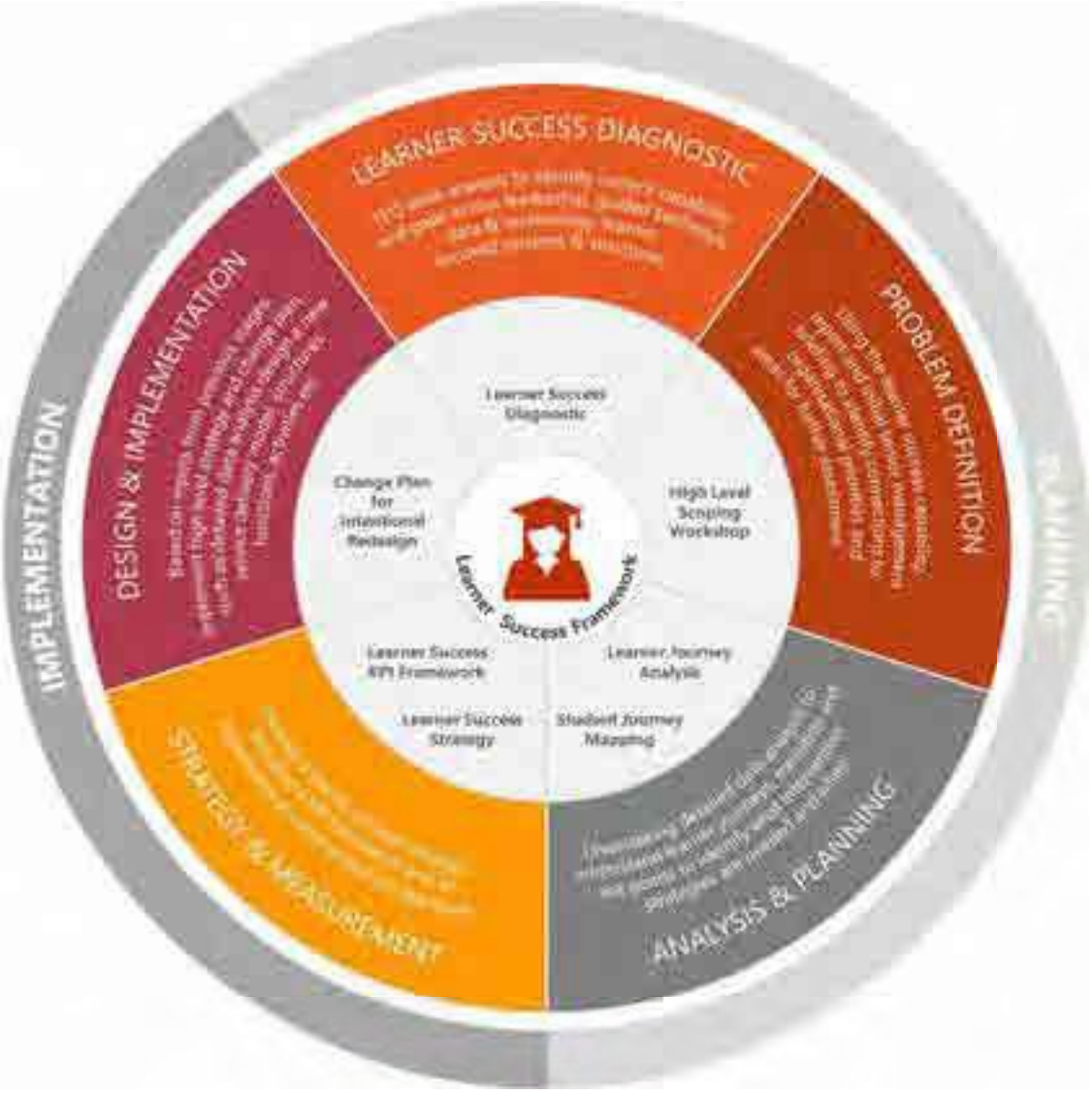


Figure 3.1: Tertiary Education Commission: Learner Success Framework (Longhurst & Breen, 2020a, p. 5).

[4] In the context of the Ōritetanga project, "learner success" is generally defined as the completion of course work, papers, and qualifications.

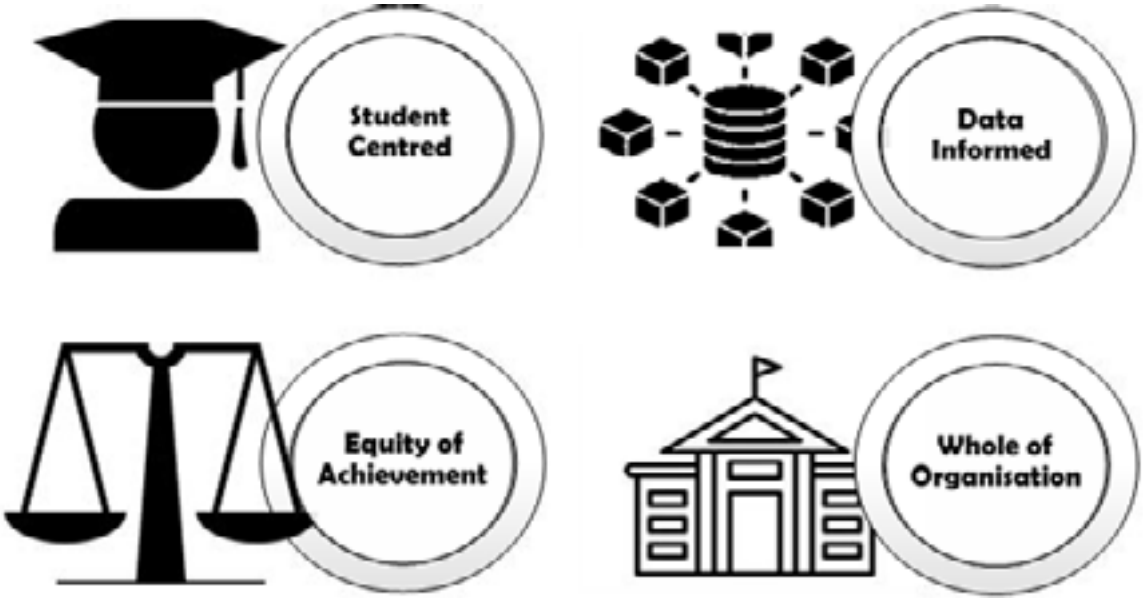


Figure 3.2: UoW Ōritetanga Learner Success project approach (Longhurst & Breen, 2020a, p. 5).

Ōritetanga Learner Success is a university-wide project that will span multiple years and is focused on building our data capabilities and data insights to inform the priorities and direction we take in the development of teaching, learning and pastoral initiatives.

- Not unlike the present project, the ongoing aims of the Ōritetanga project are:
- Radical improvements in student participation, pass rates, graduation rates, and closing the parity gaps for Māori and Pacific learners.
- Institutional capability to facilitate the educational success of all learners – catering to individual needs.
- Systems and processes for effective use of data and research that are scalable internally and can be shared with other institutions.
- Contributions to knowledge about inclusive education at national and international levels.

3.4 Data capability and tool development

The project began in 2019, through a co-funded initiative between the University of Waikato and the TEC. Phase 1 of the project, the Ōritetanga Learner Success Prototype, was completed between 1 July 2019 and 30 June 2020. Phase 1 of the project focused on better understanding our learners and developing ways to identify students who could potentially be at-risk[5] of not succeeding through better data. Thus, the project has concentrated on a major enhancement of our data capabilities, and extensive analysis of quantitative and qualitative data.

The key outcomes of Phase 1 of the project were:

1. *Data Science Platform*. This included data cleansing and machine learning to create a platform for pattern analyses to identify areas of focus. Fifteen years of historical student data was mined as part of this process. Raw data points included: demographic information, performance indicators (qualification completion and paper pass/fail), paper engagement and wi-fi and Panopto (e-learning resources) use. Various algorithms were tested to see what worked best for our dataset. The team used the Weka machine learning tool developed here at the UoW to discover patterns in the data (see https://www.cs.waikato.ac.nz/ml/weka/).
2. *Learner Success Dashboard*. The dashboard was developed and implemented. This utilises data from multiple sources to identify students who are not engaging with our

[5] "At-risk" in this context refers to students who have been identified through the dashboard as displaying markers associated with, or linked to, not passing a paper or papers.

learning systems and are therefore potentially at risk of not succeeding in their papers.

3. *Student Journey Mapping* – application to completion. This was used to understand why students leave or stay and their experience of the university at varying encounter points of the learner journey.

The work on the Data Science Platform resulted in customisable pivot tables which can provide ready information to student support teams via the University's MyReports portal. Data and customisable pivot tables that can now be readily accessed in MyReports include:

- Admissions
- Enrolments
- Grades
- Pass Rates
- Retention
- Completions
- EFTS
- Student Search
- Paper Search

Many filters can be applied to these general tables. These include, for example, students who are returning or new, Māori, Pacific and Māori and Pacific ethnicity, whether students are staying in the Halls, and pass rate quality – not just pass rates.

3.5 Learner success dashboard

Ultimately, the prototype Student Success Dashboard has also provided a potential early warning system for students who need support which is also customisable according to the following filters:

- Student Ethnicity – all Students, Māori, Pacific
- Student Residency – all Residencies, Domestic, International
- Student Division – all four Divisions and are listed as filter options
- Student Campus – Hamilton and/or Tauranga Campuses, as well as online
- Student Search – one can enter an ID number to find a specific student

Student alert triggers include:

- Students who have not logged-on to Moodle (7-14 days, 15-21 days, 21+ days).
- Students who have logged-on to Moodle but have low engagement within Moodle (e.g., created, uploaded, submitted, ended, answered something), but at least 80% of their peers in the paper have higher engagement rates.
- Students who have low viewing of Panopto where at least 80% of the other students in the paper have higher viewing rates (Longhurst & Breen, 2020a, p. 20).

The following charts are also available in the Dashboard to assist in the monitoring of students:

- Moodle Activity daily usage charts for individual students.
- Panopto Activity daily usage charts for individual students.
- Wi-fi daily usage charts for individual students (Longhurst & Breen, 2020a, p. 20).

When a student is identified as potentially needing support, a select number of relevant staff can quickly and easily see how they are doing across papers as well as other useful information. A late assignment or lack of Moodle engagement will trigger their name appearing on a list of students to be contacted for each division and the Faculty of Māori and Indigenous Studies (FMIS). For instance, relevant support staff can see if the student has any late assignments across multiple faculties and schools – as in the case of students taking elective papers in another faculty or school other than that of their main major – because the Dashboard integrates with our Student Information Technology System (SITS). Once in SITS, staff can manually see previous course work and past triggers for support, for example medical/compassionate withdrawal applications or struggling grades in previous years.

The Dashboard is only a prototype. It has been trialled on a limited basis. It can provide *near-time* but not quite *real-time* data yet – for instance, one can see that a student is late in turning in an assignment, but not always whether an extension or special consideration has been approved in every case due to lag times in processing paperwork in faculties and schools. The data is refreshed daily which may also create some lag time. The Dashboard requires further work before it can be utilised by the entire University. This will occur in Phase 2 of the project. In the meantime, it has already shown considerable promise in being able to gauge where Māori and Pacific learners are, at least in near-time.

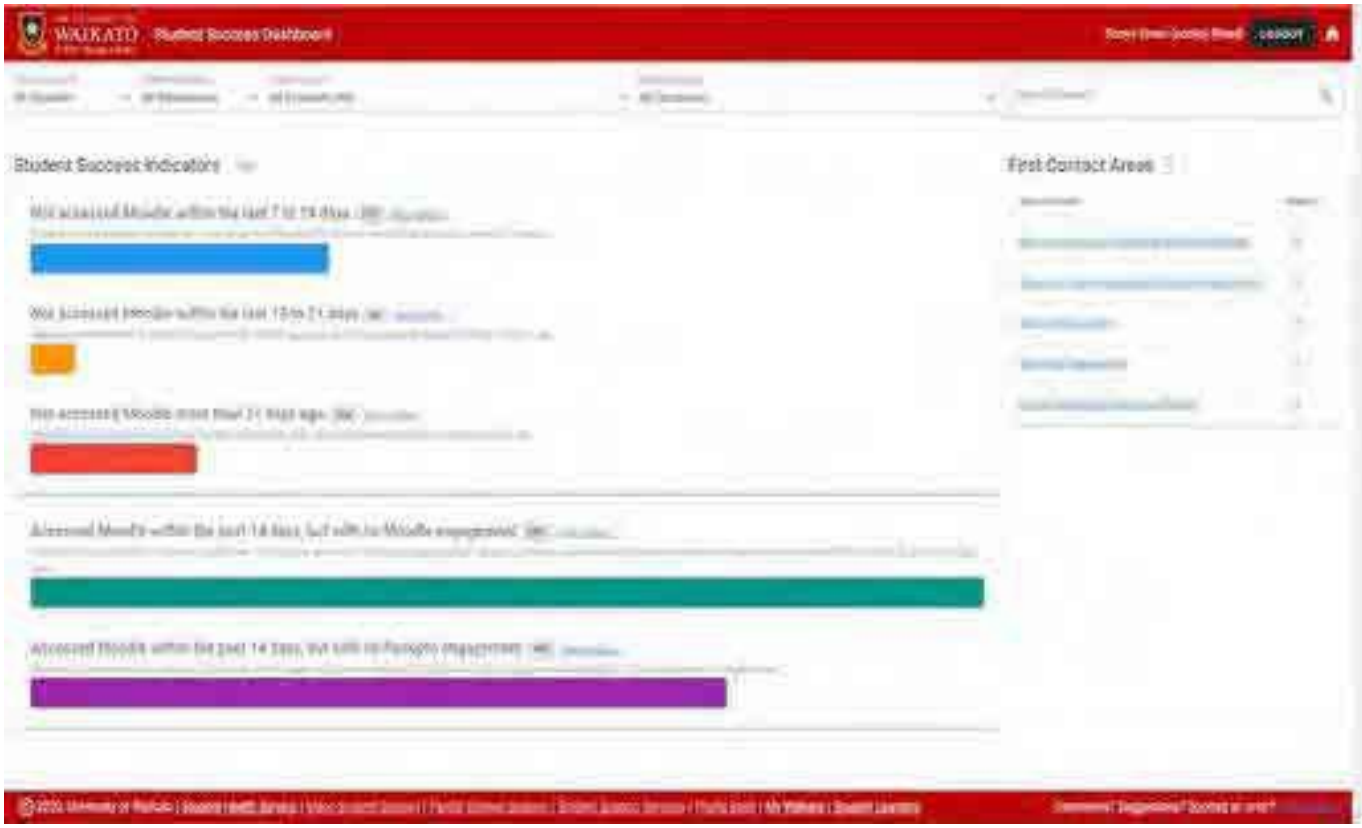


Figure 3.3: Main Dashboard (Homepage), Uow Student Success Dashboard (Longhurst & Breen, 2020a, p 21)

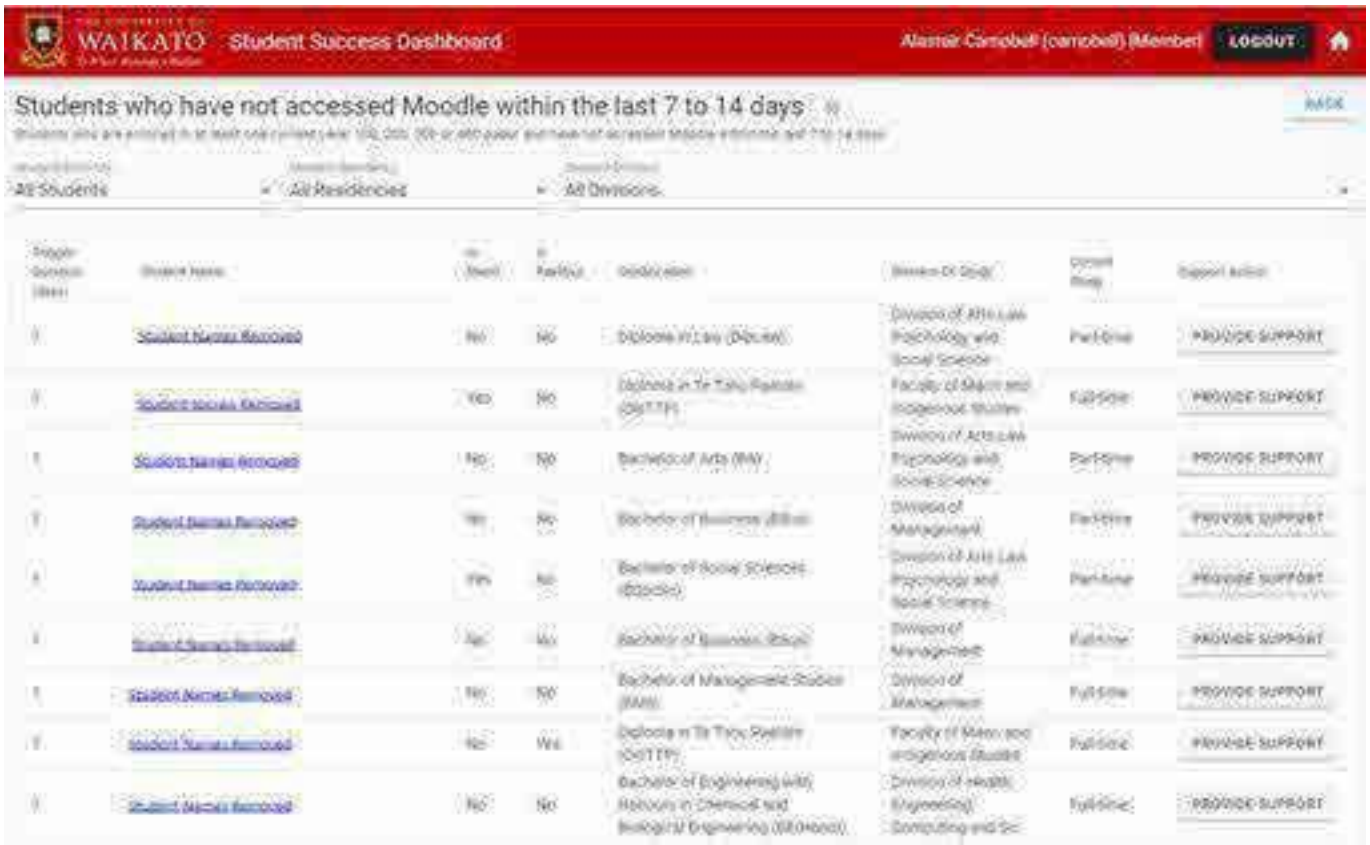


Figure 3.4: List of students who have not accessed Moodle within the last 7 to 14 days, UoW Student Success Dashboard (Longhurst & Breen, 2020a, p 22).

3.6 What we know

After mining historical data, filtering through pivot tables and applying machine learning, we now have a much better picture about: who is studying with us; what happens once they get here; how well they are doing once here, including when compared to other cohorts; and early ideas about how well those outcomes may align with, especially, individual definitions or measures of success.

3.6.1 Attrition, ethnicity and extra-curricular factors

Phase 1 of the Ōritetanga project confirmed and illuminated our understandings of where and when the gaps and disparities begin to occur. For instance, machine learning applied to data revealed that Māori and Pacific ethnicity was a key pass/fail indicator in Level 100 papers – that is, the first year of study. We had evidence that Māori and Pacific learners were not and had not been experiencing the same outcomes as other students in the crucial first year over multiple years, and that our gaps and disparities were persistent.

Student journey mapping, starting before full enrolment, also showed that Māori and Pacific had persistently higher attrition (those who were most likely to not start/complete the first year) rates in various age groups (under 20, 20-24 years, 25-29 years, 30-34 years) in 2019 – pre-COVID-19 as shown in Table 3.1:

By this measure, Māori data demonstrated consistent disparities between Māori and the general cohort, but Pacific data also demonstrated another layer of disparities of particular concern because it demonstrated a gap with Māori. In other cases, Māori have been achieving at a lower rate.

These disparities and others, however, were clearly not an innate characteristic of Māori and Pacific identity but more of a testament to the disparate outcomes experienced by Māori and Pacific across multiple areas of student experience and wider well-being (see p.18). For instance, non-starters – those who did not complete an application they started or did not end up studying with us – showed, among other factors, a much higher number of Māori and Pacific who did not complete the application due to family reasons, lack of flexibility in study, and full-time work (see p. 26). Students who began study in Semester A but subsequently left:

> *...had varied reasons for leaving. "Other" was the highest response which broadly had convenience based themes: inability to manage work and study, difficulty getting to University; and others were just taking single papers with no intention of staying. Additional key reasons for not staying were Financial and Health Reasons. Starters showed the greatest barrier was the inability to juggle university along with other life commitments. This group was more likely to have applied for the*

Attrition rates by age group				
Applicants	Under 20 years	20-24 years	25-29 years	30-34 years
All[6]	69%	48%	55%	61%
Māori	54%	55%	58%	65%
Pacific	69%	74%	74%	69%

Table 3.1: Applicants or students (under 35) who applied for study in Semester A 2019 but did not progress to Semester B 2019 (domestic undergraduate applicants for Semester A 2019) (Longhurst & Breen, 2020a).

[6] "All" students include Māori and Pacific students.

purpose of upskilling their work or career. Financial reasons were a key reason for discontinuing studies, with the "other" responses themed around inconveniences. Starters' recorded lower scores than the stayers around coping with the level of study and feeling confident to succeed in their study. They were less likely to feel like they belonged to the University and were markedly lower than stayers in regards to having friends at the University. This could indicate that preparedness and connection are important factors in determining persistence in studies (Longhurst & Breen, 2020a, p.30).

Similarly, "Māori and Pacific Ethnicity was identified as [a] key pass/fail indicator in Level 100 papers", but we also discovered that:

Moodle engagement data provides the best predictor of student pass/fail rates, with an improvement from the basic statistical probability of an 85% pass rate, to an accuracy of 89% when combined with the Random Forest machine learning algorithm (Longhurst & Breen, 2020a, p. 18).

The data demonstrated that engagement with Moodle eight days before the start of classes was an indicator of success. Further examination of the data suggested that this correlated with Orientation week and activities and may signal those who were most engaged more generally in transition (Longhurst & Breen, 2020a, p. 18).

3.6.2 Promoters and detractors

The Ōritetanga project identified clear promoters and detractors of Māori and Pacific student achievement. The following factors were most relevant to our understanding of the student journey relative to the current project:

- Student services were the biggest promoter for all students and had the highest rates of very satisfied by Pacific students.
- A positive first-year experience was a significant promoter.
- In contrast to stereotypes alleging disinterest in education and academic achievement on the part of Māori and Pacific, the opportunity to learn itself was a significant promoter for Māori and Pacific.
- Application, enrolment and paper selection processes were detractors or pain points in the student journey for all students. Māori students had the most issues with University Entrance

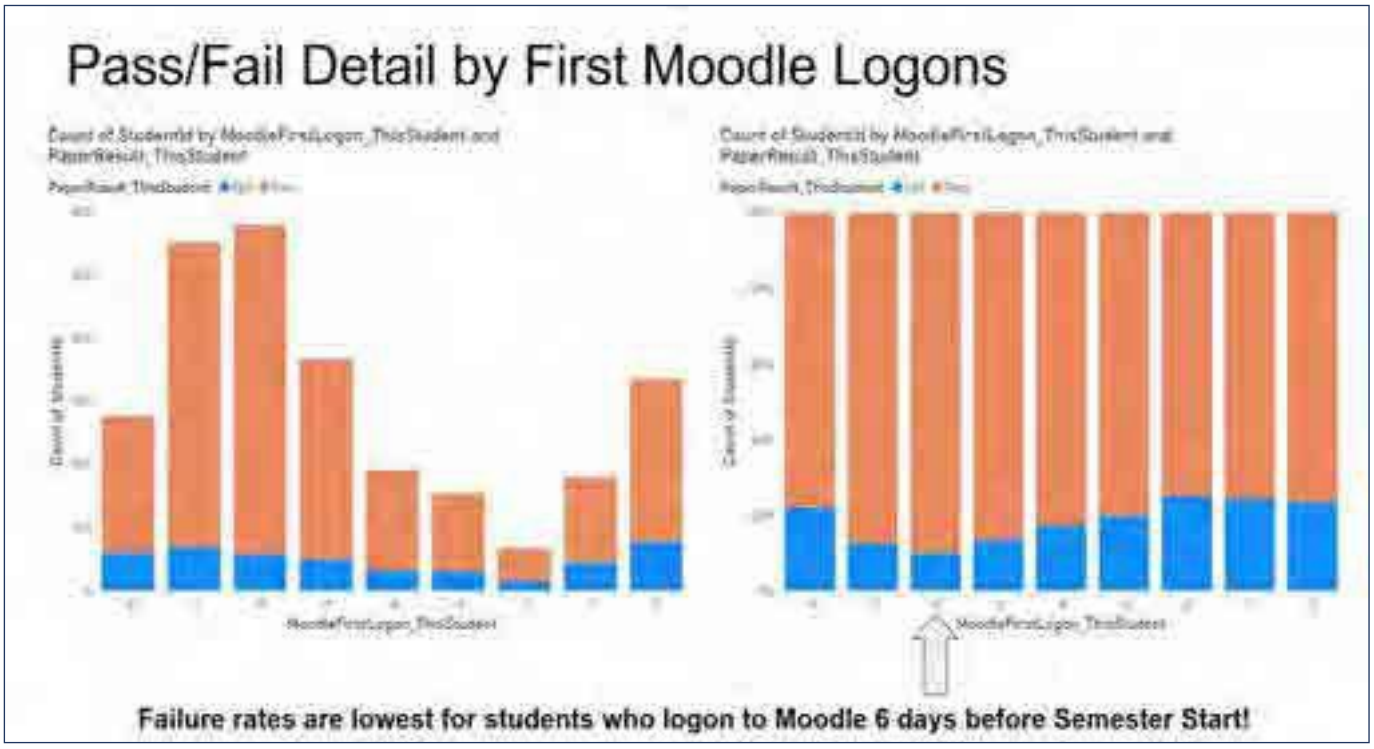


Figure 3.5: Charts from Weka showing relation between Moodle logons prior to starting the semester and failure rates (Longhurst & Breen, 2020a, p. 18).

requirements while Pacific learners were most likely to take a gap year before study.

- Employment and financial concerns were significant and consistent detractors for most students (Versus Research, 2020, pp. 45-46), but Maori and Pacific students had much higher rates of these factors influencing decisions, including the decision to withdraw. For instance, financial reasons were given by 28% of Māori and 33% of Pacific learners who started their first year but left before Semester B, as opposed to 17% for All Other students.
- Prior educational history played some part as data showed that certain high schools had higher rates of attrition.
- Age also seemed be a factor, with the 30-34 age group for Maori and the 20-24 and 25-29 age groups for Pacific experiencing the highest rates of attrition (Longhurst & Breen, 2020b, pp. 11 & 13).

This kind of data provides greater insight into those key moments during the transition into study and other points in the student journey where things go well or not so well for Māori and Pacific learners. Initially, Māori and Pacific learners leapt out of the statistics. Maori and Pacific ethnicity alone seemed to be a strong predictor of failure, a conclusion which if taken on its own, could validate bias or prejudice in our approach to teaching and learning support initiatives. What further data, including qualitative data from learners who had not been fully enrolled or retained, revealed were more complex factors impacting success. These factors were significant; not just because they were predictors, but because they went across multiple areas of well-being, and were drawn to these students in a system that otherwise seemed to be working for other students. The clustering nature of various factors and inequities was consistent with wider inequities across multiple areas of well-being outside of education. It also, however, suggested something about the system itself.

In the meantime, richer data from multiple sources – the literature review, historical data, machine learning and some qualitative data – had begun to help us unravel the one-size-fits-all educational approach often used for Māori and Pacific cohorts, allowing us to recognise actual inequities and systemic issues to improve success.

3.7 COVID-19 pandemic response and data in real-time

As discussed in the Methodology section above, the COVID-19 pandemic disrupted our project in several ways but provided some unexpected sources of data for the project. We sought to be evidence-based and were given quite vivid evidence of gaps, disparities and what life was like for our students at home and work during a global pandemic. Although narrated as a 'black swan' event – that is, a seemingly unpredictable event with catastrophic consequences (as theorised by Taleb, 2007) – the COVID-19 pandemic seemed to emphasise and magnify existing gaps, disparities and divides for Māori and Pacific students, including factors identified in the literature review. The experience of Maori and Pacific learners in lockdown would demonstrate concern in what happened in digital classrooms and learning support, as well as what happened outside of them.

3.7.1 Evidence of the digital divide

Certain challenges for Māori and Pacific became readily apparent in the early days of the pandemic through data.

What the pandemic revealed about Māori learners

The Māori IT Survey was completed by 223 Māori students as the country went into the March 2020 lockdown. These students represented various cohorts including undergraduate (48.4%), those completing qualifications (30.5%), Masters students (7.2%), and PhD students (3.1%). They represented various divisions, faculties and schools with the largest contingent coming from the Division of Arts, Law, Psychology and Social Sciences (ALPSS) (39.5%) and the second largest from Te Pua Wānanga ki te Ao – Faculty of Māori and Indigenous Studies (21.1%). Students attending Hamilton and Tauranga campuses were also represented. A significant number of those who responded (42.2%) were first-year undergraduate students.

The Māori IT survey revealed the following:

- 22.9% were unsure or pessimistic about coping with online learning.
- Only 8.5% thought they would struggle with the technology.

— However, 35.4% had data but inconsistent connections, while another 2.7% had no data.
— Most students had devices to work on but 22% had no device, were dependent on phones, borrowing devices or had otherwise insecure access to devices.

Insights about Pacific learners

The Pacific IT survey was completed by 146 students during the same period. Pacific participants also represented various cohorts including undergraduate (81.5%), post-graduate (4.8%), masters (7.5%), PhD (1.4%), and Certificate of University Preparation (CUP) students (3.4%). The respondents also represented divisions, faculties, and schools across the university with 45.2% studying in the Division of Arts, Law, Psychology and Social Science (ALPSS) and the next highest being the Division of Management (24%). 26.7% were first-year undergraduate students.

The Pacific IT survey revealed the following:
— 14.5% were unsure or thought they would struggle with online learning.
— 27.6% had either no internet plan or an unreliable connection.
— 10.3% did not have access to a reliable device.

Other issues identified by Māori and Pacific students included:
— Reliance on computer labs on campus for technology and connectivity.
— Old, unreliable, or inadequate technology – e.g., laptop without the processing power for specific software required for course work.
— No internet, unreliable internet, and inadequate data – including rural locations.
— Limited devices needing to be shared by multiple members of the family.

Ultimately, the university supported students in several ways including through individual phone calls to students to check on the technology support they required, and in purchasing devices, widgets and SIM cards in order to address digital issues. Amongst those needing assistance, certain cohorts again stood out; 28% of those who needed assistance in terms of digital devices or access (373 students) were Pacific and 25.5% were Māori.

3.7.2 The impact of extra-curricular factors during a pandemic

During the lockdown, it was evident that Māori and Pacific students have many responsibilities outside of study, particularly to their families and employers. These factors also closely correlate with many identified in the literature review.

For instance, Pacific students expressed a wide range of needs during phone conversations with support staff throughout the lockdown and in the IT and Learning Support Surveys carried out during the first week of Alert Level 4 by the Māori Student Achievement Manager and the Pacific Student Success Coordinator. Concerns we repeatedly heard in the often-frank answers to the surveys for both Māori and Pacific and in direct conversations include:
— Caring for children, parents and family while studying.
— Balancing work and study at the same time.
— Balancing all responsibilities while trying to prepare whānau and aiga for COVID-19.
— Safety at work and study loads as an essential worker.
— Mental health and well-being.
— Finding time and space to study.
— Uncertainty about the future, making ends meet and ability to study from home.
— Submitting assignments on time.

The Māori IT survey showed that:
— 33.6% had pre-school or school-aged children to look after while studying.
— 49.3% had other whānau to help care for.
— 19.7% also fell into high-risk categories – i.e., over 60, immune compromised, pregnant, respiratory issues. Another 5.4% were looking after children, parents or grandparents who were in high-risk categories.

Given the literature review and the first rounds of the wānanga and fono, these concerns were not entirely surprising, but they were more dramatic evidence of some of those success factors. Together, this data formed not only an instant snapshot of the responsibilities and challenges that Māori and Pacific students carry on a regular basis, but also how important family, socioeconomic and other factors are – albeit as revealed by a global pandemic.

3.8 Initial data insights

For many of us, the number of students generally who were, on a regular basis, depending on inadequate technology, poor internet connections and other suboptimal learning situations to do university-level work was revelatory. As former lecturers, the lack of engagement we had previously observed in students in Moodle and with papers generally made sense when one realised that many students were trying to produce research and writing on hand-held devices. Over reliance on sites such as Wikipedia rather than the Library began to make a little more sense in the case of particular students. On the other hand, as we had to arrange paper course materials to be delivered to some students in rural situations without good internet/broadband coverage, it became clear that many students were either seeing required materials as optional or could not afford them.

These insights and others revealed the ways in which our students were undertaking study and the opportunities that they were or were not undertaking. It was clear that support was needed by students around how to learn at university, including how to access existing support. This might include academic skills like research and writing as well as practical skills such as being able to use Moodle, Microsoft Office and other software and applications. Since many of these students were also often trying to struggle through on their own, despite learning support services, there was probably a need to better connect students with support before a life interruption. We also needed to consider ways to make these services more culturally accessible to increase access.

The impact of socioeconomic circumstances during COVID-19 on learner outcomes and its magnification of existing inequities, including the digital divide, are consistent with findings from the literature review (see in Phase 3 below) about, for example, financial concerns while studying. However, the degree to which the digital divide may impact student success has been especially illuminating. We saw how access to adequate digital devices, internet, broadband, enough data, and enough devices for multiple learners fundamentally act as a gatekeeper to education, immediately closing down access to learning for certain cohorts. Overall, these learnings also illuminate historical data and previous research on the digital divide (Statistics New Zealand, 2004; Gibson, 2002), national inclusion issues (Grimes & White, 2019; Digital Government, 2021a; Digital Government, 2021b; NZ Productivity Commission, 2020) and international research (for instance, McKenzie, 2021).

Student voice obtained from the surveys and conveyed through personal phone and other contacts made by UoW staff during the 2020 lockdown is also consistent with what we have heard in the wānanga and fono about teachers and learning support staff who build relationships with and make time for students. From these sources and others – including student journey data also obtained during this period – we have received greater insights into what might be happening behind participation, retention and completion numbers generally and not just during a pandemic.

3.9 Summary

Data, data analytics and machine learning gave us quantitative measures of outcomes such as participation, retention and completion and qualitative indications of the importance of success at certain parts of the student journey, especially the start of study. Data on our own students highlighted the influence of extra-institutional factors, the value of smoothing transitional steps like enrolment, the importance of early engagement with learning platforms and positive engagement and knowledge of services, and the value of culturally-responsive programmes like the Māori and Pacific orientation activities. The findings are substantiated by 15 years of historical data. We also gained tools to intervene early.

The insights gained through data analytics and machine learning have confirmed the importance of several factors identified in the literature review including socioeconomic status, financial burdens of studies, educational background, transition into study as a crucial stage, culture, community and learning support. We also had clear evidence of the importance of early engagement with and smoothing transitions for students – as well as the impact of extra-institutional factors on retention. We still needed to drill down further into the experience of Māori and Pacific learners and to allow them to tell their own stories about what motivates them to be successful, what has hindered success and what happens in classrooms and support services. The next step was to speak with students.

4 | Māori and Pacific student voices

Ka ulana ʻana i ka piko (Hawaiʻi).

In weaving, you begin at the centre.

4.1 Weaving from the centre

A Native Hawaiian proverb says that weaving begins at the centre or the piko. In ʻōlelo Hawaiʻi, the piko is the navel, the centre of a person. Lauhala weaving is a body of knowledge often transmitted from older generations to younger in weaving circles on mats (Dewhurst et al., 2013). The heart and soul of this research are Māori and Pacific learners, their families, iwi, hapū, and communities. A woven mat of learner success will reflect their position at the centre. We should hear their voices in the research and in the initiatives we create to improve learner success. Just as master weavers take their time to choose and gather the right materials, we needed to take our time to ensure that the pingao, the gold, would be gathered properly and handled carefully so that the gold would be visible.

Our methods, wananga and fono, began from the piko, with listening and learning from learners. We needed to know more of what our students were experiencing to unpack the literature and the data. We needed to hear the Waikato stories of our own students. The ako, talanoa and tok stori employed were centred in the cultures of the researchers, learners, participants, and end-users.

We experienced delays in holding some wānanga and fono because of COVID-19. A smaller number of wānanga and fono than expected were conducted by Zoom when it became more feasible to approach students, but we tried to be mindful of the added pressures on many of our students during this time.

4.2 Wānanga: Māori student voices

Three wānanga were held for the project. The first was held on 17 December 2019 at Te Kohinga Mārama marae. There were eleven participants that were current students of Waikato, ranging in age, year of study and discipline. The engagement level of these students in extra-curricular Māori student activities ranged from those who were involved in clubs/roopū and held positions across the University, to others that had little to no interaction.

Students were split into smaller groups and were given a theme to wānanga over. They were asked to write their thoughts on a post-it note and attach it to the sheet of paper before it was rotated to the next group. Each group was given seven minutes per statement to wānanga. Each group rotated through the seven statements before coming together to identify common ideas for each statement. Two final themes were then discussed as a whole group for students to share their final thoughts. The themes were:

- Managing academic demands
- Cultural/whānau responsibilities
- Institutional experiences
- Interpersonal experiences
- Teaching and learning experience
- Economic factors
- Transitions to university
- First in whānau
- Student experience reflections

The second and third wānanga were held over Zoom during lockdown on 27 May 2020 and 5 June 2020. There was a total of 10 students, again ranging in age from first year to postgraduate studies, and from the various divisions at the University. Student involvement in extracurricular activities at the University also ranged from none to heavy involvement.

The first of the two wānanga had 4 students so the questions were discussed collectively. Each student was given equal time to share their thoughts. The second wānanga had 6 students so they were split into two breakout groups that were each facilitated by a staff member. However, each group was still given the same opportunities to share their feedback around the various questions and themes.

Some caution was needed as the numbers for all wānanga were low and the makeup of individual wānanga differed between divisions. However, there was considerable consistency in students' responses to the questions, regardless of their 'home' division or faculty.

4.2.1 Managing academic demands

Feedback in this theme was grouped into support and barriers.

Support – how well supported students felt in managing academic demands

Students said this was made easier when there was a variation in teaching style to cater for different learning needs. Kaupapa Māori tutorials were also highlighted as being beneficial along with having other Māori in the class. This made classes less isolating. Forming good relationships with lecturers and support groups played a role in assisting students when required.

When students were able to access academic support this was also helpful, however some still had difficulty finding or accessing the right support. A Māori student space was suggested to improve connection between Māori students.

Barriers – challenges in managing academic demands

A sense of whakama and lack of knowledge of support services were the main barriers. Although services are well-promoted throughout the year, students still have trouble finding the right service when they need it. Mature students also felt like there weren't enough services for them or services didn't understand their unique needs. The use of te reo Māori in assessments was raised and the requirement for more capable assessors of te reo, as the return of some assessments can often be delayed. During COVID-19 some struggled trying to connect with peers while working online. Maintaining a balance between work, social life and study was also a common barrier.

4.2.2 Cultural/whānau responsibilities

This theme discussed cultural pressure, cultural support, caring for others and caring for self.

Students felt a huge sense of ***cultural pressure*** or responsibility when considering how their journey will impact future generations. Students mentioned they felt a responsibility to learn te reo for their whānau, hapū or iwi and some felt they were expected to be an expert even though they were still learning. Comments were also made about feeling unsafe having to provide knowledge as a Māori. They felt pressure to give back in general as a Māori student, particularly to their iwi; however, some students felt positive about being able to use their degree to create more opportunities for Māori.

Cultural support. The need for a Māori space is mentioned throughout the wānanga as a way to bring students together and as a source of support. Pūtikitiki, the Māori student space, has since opened on campus. Again, support for students of all ages was identified as a need.

Caring for others. Caring for whānau and being able to manage whānau expectations and obligations is a continuing challenge for students. In some instances, students have to return home when needed. However, sharing in success with whānau was a positive outcome from their studies and also the ability to encourage and advise other family members into academic study.

Caring for self. University has encouraged a journey of self-discovery for some students and a feeling of accomplishment in being able to do something for yourself. Some students also felt positive about owning the tertiary space as a Māori student. However, some found it difficult figuring out where they fit in once they recognised their own differences.

4.2.3 Institutional experiences

Students identified some positives, but also a number of challenges within the institution.

Students felt positive when support was personalised. They found the Māori Mentoring units helpful, and free or cheap services such as Student Health were a highlight.

The following issues were identified as areas within the institution where support for students was required.

- Support during enrolment and application processes for both University and Studylink and/or other external organisations.
- Understanding degree structure and the points system.
- Support for solo parents.
- Support for students with mental health challenges or providing knowledge of how to access those services.

- More clarity around what each service provides.
- Weak or lack of processes and systems when issues arise.
- Lack of information around funding opportunities or some services.
- Need for more Māori in various forums.
- Need for more clarity around what each service provides.

4.2.4 Interpersonal experiences

Interpersonal relationships were separated into external and internal categories. The external category mostly related to whānau and having to balance whānau commitments or other kaupapa. Generally, University studies will be good if home life is good. Some students felt more connected to their whānau when they were able to give back and pass on knowledge, but one student felt a disconnection from their Māori whānau. It was not discussed how this has influenced the student's studies. Other students wanted more opportunities to connect to external organisations, presumably for career options, but this could also relate to Māori-focused service providers.

Internally, some students had good relationships with teaching staff and felt more confident with class content when they were able to connect with the lecturers, but the lack of Māori staff and content was an issue. One student placed value in networking, with others noting that it created more opportunities. Connecting with other like-minded students on a similar pathway, or connecting with rōpū Māori, boosted confidence. Some students are able to connect easily and thought that the rōpū Māori create a safe space for tauira. Other students found it difficult to connect when they didn't feel Māori enough or they felt isolated when they weren't able to connect with other students or Māori. Again, the need for support for mature students was highlighted.

A physical space was highlighted again as a place to connect and build relationships. It was also suggested that there should be more promotion of iwi to show more pride in Waikato University.

4.2.5 Teaching and learning experiences

Discussions around teaching experiences highlighted the negative effect bigger class sizes can have on the connection with the lecturer and content. Students felt smaller class sizes made for a better learning experience

The quality of teaching varies across the University with some using uninspiring traditional teaching styles. Knowledge of tikanga Māori is also lacking across teaching staff, along with Māori content.

The ability to learn new knowledge and just being able to study is a success for some students. To also apply that knowledge within the real world made students feel successful. Students enjoyed practical learning specifically in FMIS. Some students didn't understand the validity of some assessments and there was also an expectation that students know how to write structured essays.

Technology played a huge role in learning satisfaction especially within the COVID-19 year. Students noted there were differences in the use of resources such as Panopto and some lecturers were incompetent with the use of technology. Students also felt there was no support for students who were technologically challenged. Moving online hindered motivation.

4.2.6 Economic factors

Some students found the transition to University was made easier by the provision of scholarships, however most comments under this theme focused on how expensive it is to study, eat, travel and live while at Uni. The personal struggle of balancing work and study or the pressure of providing for whānau was difficult to manage and sometimes scholarships or financial aid was hard to find. Also, Studylink was sometimes difficult to access.

4.2.7 Transitions to uni

Some students found the transition experience isolating and overwhelming due to the overload of information and the large numbers of students. In 2020 especially, transitioning into the university was difficult for face-to-face learners. Some also felt that there wasn't enough of a focus on all aspects of student wellbeing. Despite this, a number of students had a positive transition

experience. Scholarships helped relieve the financial burden and choosing the right course of study made things easier, but students felt more positive about their experience due to the communities they belonged to. These communities were within their papers, the Halls or within the rōpū Māori.

4.2.8 First in whānau

Only students who were first in whānau contributed to these discussions. When discussing the perceptions of whānau, most saw their whānau member at University as a role model and knew the importance of having a qualification. Challenges include the lack of understanding of the tertiary space within the whānau and for some, a lack of support from whānau who haven't experienced University. Some students also felt their whānau were resentful of their allocation of time to pursue their studies. Although some students experienced self-doubt, students were also proud of themselves for committing to this journey and being able to share their successes with whānau.

4.2.9 Student experience reflections

Students were asked for any final reflections on their student experience. They emphasised four main areas.

1. The need for more Māori students, more quality Māori academics and more Māori content in all papers.
2. The importance of lecturers understanding and catering to different student needs.
3. Better communications to students about everything available to students academically, financially or otherwise.
4. Success is different to everyone, depending on what one values. It is about achieving goals or receiving an A. Sometimes students did not feel successful unless they were sharing their success with their whānau and community.

These areas stress individualised approaches to students but also cohort-specific approaches to teaching and learning. Once again, Māori students stressed that success is also individualised and relative to cohort.

4.2.10 Voices from the centre

The voices of the students who were kind enough to share their experiences and thoughts are also expressed in the following quotes from the wānanga:

- *"When I get an A it's a huge booster especially in my mainstream papers. I realise I do know something!"*
- *"Our division is white-washed and it's a hard place for me to feel comfortable."*
- *"Seeing the love my Dad has for te reo Māori made me want to feel that love for te reo Māori and I want to make sure the next generation feel that love for te reo Māori."*
- *"Tikanga Māori needs to be adapted into their pedagogies."*
- *"Success is handing an assignment in knowing that I put in a good effort."*
- *"Our guest lecturer told us we should be grateful that we're able to learn Māori at University but I thought, no, we shouldn't be grateful that we have to pay $30,000 to learn our own language when we should've just known it."*
- *"My sister was completing an assignment in Media studies about how the media affects culture and was told she was culturally biased because she had discussed the haka and how it is appropriated by people who have no understanding of it for financial gain."*

These voices confirm that success is familial and collectively enjoyed, even generational. They also express the need for more culturally-responsive pedagogies and content and for greater awareness on the part of teachers of bias and discrimination.

4.3 Fono: Pacific student voices

Fono were conducted in two rounds, primarily with:

- Pan-university groups in four fono which took place on 2-3 December 2019 and 5-7 February 2020.
- Division-specific, individual fono with all four divisions – Management; Health, Engineering, Computing and Maths and Science (HECS); Arts, Law, Psychology and Social Science (ALPSS); and Education – held during May 2020.

Additional rounds planned for the Faculty of Māori and Indigenous Studies (which sits under DVC Māori instead of a division) and students who have participated in the University's Jumpstart programme,[7] were affected by the uncertain return to studies following COVID-19 and there were low numbers of students available to participate. Although not specifically interviewed as individual cohorts in a specific fono, members of these cohorts were represented in other fono.

The Pacific Student Success Coordinator conducted all fono. Many fono went over time to accommodate the rich feedback which was being offered by the students. Food was also shared at all fono – except the fono conducted on Zoom.

4.3.1 Questions for talanoa

Nineteen students participated in the first round where students were asked four basic questions about challenges and success factors, namely:

- Why did you choose to come to university?
- What support have you accessed and is it working for you – internal and external support?
- What are some barriers to success for you?
- What could the university be doing better?

In the second round, as students were experiencing the COVID-19 pandemic and following the IT and Learning Support Surveys, we decided to drill down further into the initial responses by asking similar but more specific questions about motivation, challenges to studying, success factors, programmes of study, learning support, teaching and curriculum. Students were grouped into fono by division. They were sent questions covering the following areas prior to the fono:

- ***Student journey.*** Why did you come to university? Why are you studying what you are studying? What challenges have you faced while studying?
- ***Journey to success.*** What does success mean to you? What factors have helped you succeed at university? What has made you feel included or excluded at the university? What role have teaching and learning support staff played in your university journey? What other factors are important to your success? What is your favourite paper and why?
- ***Experience in faculties, schools and programmes.*** What do you love about this faculty/school/programme? What aspects of your study in this faculty/school/programme would you keep? What would you change?
- ***Learning Support.*** Do you know which learning support services are available to help you with your study? Have you accessed them? How did that work for you?
- ***Teaching.*** Do you regularly attend lectures, labs, tutorials and workshops? Why or why not? Which lecturers and tutors are your favourites? Why? How accessible are your lecturers and tutors? What has been your experience with lecturers and tutors when you meet them outside of class? Do you engage with most or all of your readings and course materials? Why or why not?

Thirty-three students participated in the second round. The feedback from the second round, with more in-depth questions and during COVID-19, was very rich. As in the case of the wananga, several themes are apparent in the combined feedback from both rounds of fono. Some caution was needed as the numbers for all fono were lower and the makeup of individual fono differed between divisions. However, there was considerable consistency in students' responses to the questions, regardless of their 'home' division or faculty.

4.3.2 Thematic analysis of fono

A thematic analysis of the fono responses and talanoa reveals several themes which have some resemblance to the themes arising from the wānanga, but also reveal heterogeneity and some differences.

Pacific students choose to come to university for complex reasons

Pacific students expressed a sense of being blessed or "privilege[d]" to be at university, but also a sense of inadequacy at times. Family, including "uplift[ing]" family, setting example for

[7] A programme which provides new students with the chance to get a 'jumpstart' on their studies during the summer while learning academic skills, becoming acclimatised to campus and making friends.

younger siblings and "not wanting to waste my parents sacrifice", was a strong and frequently mentioned motivator, as were "challenging stereotypes – especially in STEM areas" and "being able to give back to our community in expertise". Financial opportunities, including the availability of scholarships and fees-free and "[b]etter job opportunities that will enable me to earn more money" were influential, as were high school careers advisors.

Socioeconomic status, "first-in-family", and parents' educational status are important

Several students mentioned that they are first-in-family, and that parental influences affected their decision to take up university study. For one or two, parents' tertiary success provided a role model. Acting as a role model for others, and opportunities for careers/career changes were also motivating factors. However, financial pressures and the need to balance study with full- or part-time work were identified as challenges to success – as was the loneliness associated with being away from the family.

That family/fono support and encouragement for students to attend university is reflected in students' perceptions of success. Being able to support their families and/or their home communities ('giving back' to the community) was identified as a measure of success by most participants. Related to this was the desire to be a role model for others. However, the need to juggle study with family commitments and responsibilities was identified as a challenge to academic success.

A strong Pacific Island support network on campus was identified as highly valued by all participating students

There was a sense from most of those who participated that they felt included at the University as the result of relationships built with Pacific staff, support staff, student associations, and because of cultural and community events and activities. Field-specific Māori and Pacific advisors and mentors, as well as teams including Student Learning, Careers, Scholarships and the Library were well-known to students, including 'aunties' and 'uncles'. Relationships with senior students and other Pacific students studying similar qualifications were also enabling.

Students' previous educational history is also important

This includes acculturation relating to academic learning. Fono students mentioned the challenges of learning a new 'language', and that the University culture can be challenging and alienating. Another sub-theme is time management. The move from the regimented learning environment at school to the university environment presents a real challenge to success. This is something that could be addressed via bridging education and the development of positive relationships with the university while still at school, as also identified in the literature review.

Success (particularly but not exclusively at first-year level) can be boosted by increasing the visibility, accessibility, and cultural relevance of support services and providing a welcoming, supportive environment inside and outside the classroom

Without exception, students identified a wide range of support services (Accessibility Services, the Library, the Student Learning tutoring team, Careers Office) and a welcoming, supportive environment as making them feel included (rather than excluded) in the University community and supporting their learning success. The various Pacific Island students' associations (at university level and in the Divisions/Faculties) had a very significant positive impact on students' feelings of being part of a Pacific community on campus. These provided peer support as well as a feeling of cultural belonging. Friends, families, club membership, social activities, managing physical and mental health, "not taking on too many responsibilities", and personal faith were also identified as supporting success and enhancing inclusion in the University community. Respondents did not mention Student Health Services, although one did emphasise that support from Accessibility Services had made all the difference to their success.

All respondents named particular support staff and mentors as making a positive difference to their studies, including the aunties and mentors as well as Student Learning and academic admin staff. Having one person as a point of contact, who could

direct them to other support people and systems, was mentioned approvingly. This emphasises the importance of forming positive relationships with other members of the University community for student success.

Pacific students, including those who come from overseas, also feel excluded at times

Students did report some feelings of exclusion on campus. Part of this had to do with the feeling of not belonging, with the University culture and bureaucracy reported as alienating by some students. This added to difficulty in making connections. There was also a perception that – beyond the university community – people behave 'differently' in New Zealand as opposed to in the islands.

Culturally-responsive pedagogies enhance outcomes for all learners

While no fono students specifically mentioned cultural aspects of pedagogy, they did mention the importance of active learning opportunities rather than formal lectures. In addition, it was clear that their favourite papers were those that they engaged with the most. These were often papers which allowed application of theoretical learning and encouraged reflection and exploration.

However, Pacific learners also value teachers who care and build meaningful relationships with their students

Several other teaching-related factors were important for these students. All participants mentioned the value of academic support staff, mentors, and peer support: it was felt that mentors and aunties make a real difference in keeping them on task. Similarly, while students felt that most lecturers are accessible, it's clear from their comments that they particularly value having teachers who are engaging, approachable, relatable, and who build relationships and are clearly interested in their students' success. Students were especially descriptive when asked about their favourite papers and teachers and support staff. Across all divisions, characteristics of favourite teachers (including lecturers and tutors) included: "on to it", caring, engaging, "knows your name", "explains topics well", "breaks down complicated topics", good communication, "approachable", spending extra time to help students outside of lecture, and being interesting, humorous, or organised.

As the literature has already told us, *personal connections are extremely important to feeling a sense of belonging, and in keeping students engaged with their studies.*

Pacific students value curriculum and course materials that are engaging and have manageable workloads

In terms of actual teaching and learning activities, it is clear that these students:
value active learning opportunities (tutorials, labs, and workshops) over more passive lecture environments (and, in fact, they recommended that teaching methods should change to include a larger interactive, active-learning component); strongly value the opportunity to access lecture recordings (and feel that all lecturers should provide them); prefer to attend engaging lectures but watch others online; feel some pressure to attend lectures because they've made a financial investment in their learning.

Notably, many students expressed that course readings are often not interesting, relevant, or engaging and prefer to rely on Powerpoints and lectures/lecture recordings to acquire knowledge. Another sub theme related to workload was that it was hard to keep up with the sheer volume of reading required across their programme, and some students struggled to find a quiet space at home in which to read. Workload was a commonly identified issue for these students. They also identified that assessments for multiple papers tend to fall due at the same time, which creates pinch points. These are issues that could usefully be addressed as part of the University's transition to a more fully 'blended' approach.

Ultimately, students' favourite papers: were consistent with career choice; offered different perspectives on the world and what students were studying; incorporated Pacific content, topics, and subjects; and included opportunities to be creative, interactive, or hands-on.

4.4 Reflections on literature, data and Māori and Pacific student voice

After weaving Māori and Pacific student voice together with the findings from the literature and data, further details of Māori and Pacific student success emerged, like distinct threads and patterns in the weave:

- Pacific learners frequently identify themselves as the first-in-family.
- Both groups say that not having family members understand what study entails, including time for study, is a barrier to success.
- Financial pressures are a big barrier for both groups. Understanding and encouraging employers are a plus. Many attend because of the government's first-year "fees-free" policy. Both groups are challenged by the added expense of caring for family members and upholding cultural responsibilities.
- As in the literature, our students consistently confirmed that whānau, aiga and families are the most important factor enabling success. Both groups are motivated by being examples to younger siblings, breaking stereotypes, giving back to communities and "not wanting to waste [their] parents' sacrifice".
- We know that creating success in the first year and first semester is crucial. Our data also shows dramatic differences in pass rates and pass quality between Level 100 and other levels. Pacific students in their third and fourth year told us that they usually seek help from lecturers they built relationships with in their first and second years.
- Environment and people are also critical. Our Māori students value tuakana/teina peer mentoring and networks, and staff relationships. Pacific students call support staff "aunties" and "uncles". For Pacific students, lecturers with 'open-door' policies are a plus. For both groups, family members who attend or graduate from Waikato are positive role models.
- When Māori and Pacific students succeed, their whole family succeeds. For both, success is intergenerational and redresses historical concerns including colonisation and underachievement.

These findings emphasise that what happens outside the classroom is as important as what happens in it. However, they also emphasise the importance of doing small things in a classroom, such as remembering someone's name, being approachable and creating a welcoming learning environment. Building data analytic capability and tools required a certain amount of financial investment, but many of these success factors relied on people and relationships. This is our why and the strength of the weave.

With the literature, data and voice repeatedly reinforcing one another, our next step was to weave the richer stories being told about learner success into tailored learning initiatives to reflect this richer data.

5 | Data-informed initiatives development

Whiria te tangata.

Weave the people together.

5.1 Weaving people

We wove our learnings from the literature, initial data, and student voice into two culturally-responsive initiatives for Māori and Pacific learners. Both are focused on transition to study for first-year students and encourage success through cultural values and legacies. Each has given us the chance to incorporate common success factors and distinct responses for Māori and Pacific. While recognising heterogeneity, both recognise extra-institutional factors, influence of whanau, aiga and history. They seek to address gaps and disparities especially in retention through optimising transitions into study from the start of the first year, learning support services targeted to Māori and Pacific, and building culture, community and support on campus.

5.2 Te Kāhui Pīrere

Te Kāhui Pīrere (TKP) is a first-year transition programme, which was piloted by the Deputy Vice-Chancellor Māori office in 2019. Its development has benefited from the research. Its development has, in turn, informed the development of the Imua Learner Leader Initiative (see below).

Te Kāhui Pīrere was established to support the retention of first-year students by providing focused support for the transition process throughout the students' first year at university. Previous attempts to engage this cohort as individual students or through faculties weren't particularly successful so the programme first builds a foundation based on the value of whakawhanaungatanga. Once the relationships have been formed, the students are more inclined to attend workshops and activities or access support throughout the year.

Towards the end of their first-year, students are also encouraged to consider their second year and ways to continue engagement outside of their studies. This may include extra-curricular activities such as joining a student group if they have not already or taking up leadership roles within those groups. They are also encouraged to apply for Te Āhurutanga, the Māori Student Leadership Programme.

5.2.1 Description of the programme

The name of the programme was suggested by senior Māori students who were employed to assist with the development of the programme. The word pīrere represents the baby bird leaving the nest and thus the challenges that come with moving into new spaces and growing older. As a kāhui (flock) they are instantly connected to another whānau and therefore, not alone in this journey. Te Kāhui Pīrere is focused on supporting Māori students' transition from the 'nest' of their homes, beneath the wings of their whānau, into their new life and whānau at the University. Students apply to be a part of the programme based on the following criteria:

- Enrolled in their first year of degree level study, i.e., preferably a school leaver.
- Enrolled and identify as a Māori student (there is no requirement to be a reo speaker or to be an expert in tikanga Māori/te ao Māori).
- Able to commit to the kaupapa of the programme.
- Positive and open to new experiences and meeting new people.

In applying for the programme, students must commit to attend activities and events.

Figure 5.1: First-year Māori students attending Te Kāhui Pīrere Wānanga, March 2020.

522 The 2020 programme

The 2020 programme involved a noho marae, workshops, social events, and regular check-ins during trimesters. All students who become part of the programme were expected to attend these events.

A crucial relationship building event for the year, the noho marae, would have had students stay at a local marae for a weekend wānanga. The purpose of the noho was not only whakawhanaungatanga, but also an opportunity for students to discuss and set their own goals for the year, supported by tuakana (senior students) and programme staff. The COVID-19 pandemic and subsequent lockdowns, however, had a huge effect on the level of student engagement with Te Kāhui Pīrere in 2020. It impacted numbers that engaged initially and continuing engagement. It certainly required support teams to be agile. Although the first kaitahi went ahead, the noho marae had to be cancelled and was replaced with a one-day wānanga. This was attended by a small number of participants as most students focused on preparing themselves for the potential lockdown. To replace the face-to-face programme, a schedule of online initiatives was created, and a Te Kāhui Pīrere Instagram page was created to maintain engagement.

Understandably, throughout the year students disengaged and would not respond to attempts to re-engage them. The focus for these students was to ensure they were supported to withdraw from their studies, if required, or they were encouraged to seek compassionate withdrawals for Trimester A.

A Māori ki Waikato Google site was also updated to assist with communications to students and to provide a knowledge base for any support service required. This site held workshop recordings and was available to all Māori students. Although support was available for our Te Kāhui Pīrere throughout lockdown, COVID-19 encouraged the Māori ki Waikato team to work together to provide support resources that catered to all levels rather than focusing on specific programmes.

As a result, the programme moved into a one-day wānanga that focused on lockdown preparation including:

- Intro to Moodle & Degree structure
- Building and maintaining networks during lockdown
- Handmade hand sanitisers

The programme was revised to ensure that activities and engagement with this cohort continued throughout lockdown and the focus on

retention remained a priority. Thus, activities and events in 2020 included workshops on:

- Essay writing
- Better understanding degree structures and paper requirements
- Assignment and exam preparation
- Budgeting advice
- Hauora and well-being.

523 Integration into wider student support

Te Kahui Pīrere is supported by and embedded in the larger student support programmes and networks of Māori ki Waikato. The programme is supported by a webpage with ready links to videos (see Figure 5.3 below) and learning support

Figure 5.2: First-year Māori students attending Te Kahui Pīrere Wananga, March 2020.

Figure 5.3: Video explaining Te Kahui Pīrere to potential participants.

including the Māori Mentors placed within faculties and schools across the university.

The programme was also supported through social media. Since 2019, the programme has been frequently featured on the Māori ki Waikato Facebook page, which has extensive resources and real-time information about workshops and seminars. The Facebook page integrates the programme into wider support opportunities and events. The FB page is full of positive images of peer, alumni, and community leaders, as well as colour, culture, community, and support. Social media provides ready communication between Māori support staff, student leaders and first year students, and increases belonging.

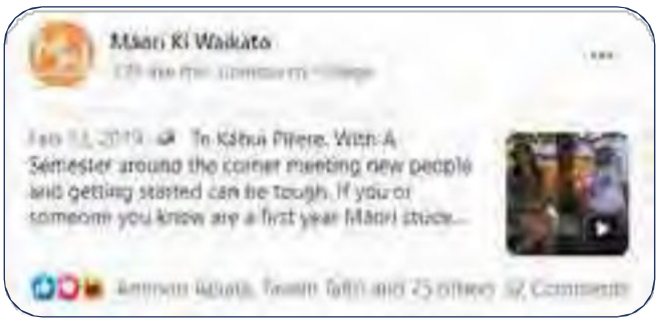


Figure 5.4: One of many posts on the Māori ki Waikato Facebook page connecting TKP students with the programme.

524 Initial feedback on Te Kāhui Pīrere

The initial feedback from students in the first year of the programme was very positive. The following were highlights for students who participated in the TKP programme in 2020:

- Trips
- Networking with other Māori students
- Sense of belonging when away from home
- Not needing to speak te reo Māori, but building language and cultural skills through the programme
- Creating relations with students from other iwi
- Activities building whakawhanaungatanga

In 2020, one core aspect of the programme that students identified as being important were opportunities for social activities to maintain the sense of whanaungatanga within the group. This aspect of the programme was harder to deliver due to the restrictions of COVID-19. Feedback from

the cohort underscored the ongoing importance of this for Māori students particularly in the first year. Being able to connect socially and in a kaupapa-focused way was seen as being important.

Student feedback generally confirmed the value of this type of programme and helped us determine whether our topics were relevant and useful. This helped us to refine the programme and to integrate the programme with other support services in 2021. For instance, feedback which was used to strengthen Te Kāhui Pīrere and the wider Māori Student Achievement Programme (see https://www.waikato.ac.nz/tautoko/home) mentioned:

- More tailored support for mature or adult learners
- Better knowledge of support services
- Better promotion of those services
- Greater understanding of degree structure

The programme has worked more closely with a Senior Māori tutor in the Centre for Tertiary Teaching and Learning (CeTTL) in 2021. Workshops in 2021 have included:

- Exam tips and tricks from successful alumni and senior students
- Referencing workshops
- How to end the year strong
- How to re-enrol for 2022

Feedback from the project has also contributed to the review of the Māori Mentoring Programme operating within divisions and Tauranga through the addition of a first-year support component. This will provide more focused support for first year students within these areas and capture those who do not sign up to the Te Kāhui Pīrere central programme.

5.3 Imua Learner Leader Initiative

The Imua Learner Leader Initiative is a cultural legacy-informed programme for first-year Pacific students launched in July 2020, soon after we came out of lockdown. It is also focused on improving retention and setting students up for long-term success.

I mua is a Hawaiian phrase, sometimes written as imua, which means to go forward or lead from the front. It readily translates into many of Pacific languages.[8] The ability to imua is key to success in any endeavour but especially in university study. This programme is designed to help each student who participates to go forward and lead from the front in their university journey. It aims to help every student to be a learner and every learner to be a leader. It stresses that no matter who you are or where you come from, whether you have been an honours student or are just getting by, you can imua in your tertiary education.

This programme is designed for Pacific learners who are new to university study, including those in the first year of an undergraduate qualification. It targets crucial transitions in the new student's journey to enhance success and achievement. In 2020, this programme was aimed at Trimester B success, especially towards helping students cross the finish line during a challenging year.

[8] For those with roots in the Pacific, *imua, muamua* or words like them are familiar. In te reo Māori, *i mua atu* means "before". In Samoa, *muamua* means "to advance", and also "before" and "unprecedented". In Tongan *laka atu ki mu'a* means "go forward". In other places, the words translate. In Pidgin, for instance, the word *kojet* means "to charge". In Kiribati, *tere* means "to go forward" while *waki* can mean "to go forward" but also "to realise". In 'ōlelo Hawai'i, *muamua* means "first" and "in advance" while *imua* can also mean "before" but often means "forward" or "go forward".

5.3.1 Cultural legacies of success

The materials for the programme emphasised that, like traditional Pacific navigation, an important part of moving forward is knowing where one is now in relation to where they have come from. For Pacific people, this means looking back to the legacies left to us by our ancestors, histories, cultures, and languages. A legacy is something valuable left to us by those who have passed on. True leaders leave legacies for others. The three Pacific cultural legacies that the programme builds on are:

- Voyaging and Learning
- Work/Life Balance
- Leadership and Excellence

Voyaging and learning provided a cultural legacy that connects all indigenous Pacific peoples, including Māori. Voyaging provides a history and heritage that counters and disrupts deficit narratives and demonstrates to Pacific students that their ancestors were smart, innovative, and brave learners who did things that had never been done before. Work and life balance (or working smart) is about the value of work, working together and working smarter in our Pacific cultures. Leadership and excellence introduces indigenous Pacific principles and examples of leadership and excellence to inspire at a crucial time of the year.

5.3.2 Basic features

Basic features of the programme in 2020 included:

- Three *Modules* focused on each of the three legacies and aligned in focus to a particular time in the semester – e.g. start of the journey (voyaging), mid-term before the final push at the end of the year (work/life balance) and finishing well (leadership and excellence).
- Three *Legacy Seminars* which introduce and provide culture-based learning and leadership principles and skills; relevant Pacific proverbs and language; successful Pacific students, alumni and community leaders as inspiring speakers; pathways of success for university; opportunities to network with other Pacific learners; and a healthy lunch.
- Regular *Legacy Tasks* to complete between Seminars, including check-ins with the Pacific Student Success Coordinator and Student Learning staff and attendance at Pacific Academic Skills Workshops, which were mainly about being there, acquiring academic skills and forming relationships with key support staff.

This programme was coordinated by the Pacific Student Success Coordinator, Ms Sianiti Nakabea, and assisted by Pacific Senior Tutors from the Centre for Tertiary Teaching and Learning (CeTTL) and the Pacific Student Advisor for the Division of Arts, Law Psychology and Social Sciences. In 2020, the voluntary programme originally had 26 participants. Eighteen fully completed the programme by meeting all requirements.

By way of example, the following slides were used to launch Module 3: Leadership and Excellence at the third Legacy Seminar in September 2020. They demonstrate the introduction of the cultural legacies of success, use of Pacific languages and proverbs, and the timeframe for the module. Our guest speaker that day was Leaupepe Rachel Karalus, Waikato alumni and Chief Executive of K'aute Pasifika Trust.

In each Module, learners were given key questions to take away to think about during the Module (see Figure 5.6 above). In this case, these questions draw upon the strong motivation that families and collective success provide for Pacific learners while also being geared to finishing the year well – that is, doing their best, considering what their success will mean to others and whose footsteps they might follow in, even if they are the first in their family to attend university. These questions challenge them to think of success in terms of the collective and to think of leadership and excellence as something that is 'in their DNA'. In the face of deficit narratives or imposter syndrome, it challenges them to think of themselves as learner leaders who, even as one person, can make a difference through their educational success.

As in the case of TKP, the Imua programme was advertised, and students were supported and connected by social media including the Pacific at Waikato Facebook page (see Figure 5.7).

MODULE 3: LEADERSHIP & EXCELLENCE

Worth a Thousand

9 September – 7 October 2020

Objectives

Students are able to see themselves as Pacific learner-leaders in their families, homes, peer groups, and communities who imua by going forward and leading from the front. Students have a greater desire to excel and lead by example in their education. Students finish the year with all options available to them.

The legacy

- Expectations of leadership
- Fakaʻaʻaʻa – Only one but worth a thousand
- Fakaʻaʻaʻa (2) – Strive for the summit
- Ofu ala i le pulu i le tautua – The pathway to authority is through service

IMUA

- "Always moving forward"
- Walking together, walking alone
- "Leaders eat last"
- Tautua, kuleana
- Building people and relationships – eg mafana, rangatiratanga
- Power of example

QUESTIONS TO PONDER

- Whose example(s) of excellence has/have blessed your life? How have the examples of others blessed your life?
- What are some of your strengths and how would you like to use these at university and beyond?
- What legacy of excellence do you want to leave for your family, your community and your culture?
- How can you be an example of leadership and excellence as you complete Trimester B?

Figures 5.4–5.6: Powerpoint slides from Imua Legacy Seminar 3, September 2020.

Figure 5.7: Facebook post for Imua Learner Leader Initiative Legacy Seminar, September 2020.

5.3.3 Initial feedback from participants on the Imua Initiative

All students who completed the programme were asked about their experience in the programme in the final catch-up with the Pacific Student Success Coordinator. From their feedback, we learned that:

- Most Pacific students were unaware of cultural legacies of success such as voyaging before the programme, but valued learning about that.
- Highlights of the programme included the presentations, including having guest speakers whom they could relate to and who were motivational, being able to develop leadership skills and think like a leader, the inspiring and motivational examples of Pacific leaders and the "positive vibes".
- Although Pacific community leaders were respected and appreciated, the most popular speakers were Pacific senior students or recent alumni, including those whose journeys had not been easy. This included a mother of three who had worked multiple jobs to finish her degree and who is now working at a tertiary institution where she is helping Pacific students.
- Challenges with the programme included timing – some students could not attend the presentations in person due to clashes with schedules or assignments being due, finishing all tasks, time management, and "opening up" in the group.
- Suggestions on how to improve the programme included getting more people to attend, the purposes of tasks being clearer, more opportunities for students to interact, and times that did not clash with schedules.

We also heard from students that they felt more "at ease", supported and knew where to find support; gained confidence; found networking opportunities, and wanted to be involved with Pacific student associations as a result; and felt a sense of belonging. Pacific support staff were, again, known by name and recognised as success factors.

The thoughts of one student represents the feeling in much of the feedback received:

> *I really enjoyed how raw and personal it was. It had a lot of current students and alumni open up their experience and showing their vulnerability. They also had people who had the same upbringing as mine and how it's about your choice and what you do to get the most out of the experience that will make your journey to success worthwhile while having the most supportive people being there for you. I enjoyed everything especially the food!*

Given Imua's leadership focus, it has been pleasing to see several graduates of the programme take on leadership roles within Pacific student associations in 2021.

5.4 Reflections on initiatives

Both initiatives reflect common success factors for Māori and Pacific first-year learners:

- Utilising whanau, aiga and history as a strength and motivator.
- Targeting and optimising transitions into study, especially in the first year of study at university.
- Increasing awareness of support available and starting relationships with support staff early.
- Creating a sense of belonging and safe space.
- Providing role models that Māori and Pacific learners can relate to.

How each programme has built on these factors is unique, however. These initiatives leave room to address complex and diverse backgrounds, identities, cultures, and languages – that is, to also recognise the heterogeneity of Māori and Pacific students. The highlights and positives about the programmes are also rooted in the fact that these programmes are tailored to cultures, languages and

identities, as compared with the one-size-fits-all nature of many teaching and learning initiatives. This clearly resonates with both Māori and Pacific students who are looking to see themselves reflected in teaching and learning at university and to be able to be themselves while pursuing a university education.

Figure 5.8: Some of the first graduates of the Imua Learner Leader Initiative at an award luncheon with the Assistant Vice-Chancellor Pacific and Pacific Student Success Coordinator.

6 | Cohort tracking and further findings

Ma ka hana ka ʻike (Hawaiʻi).

In the work is the knowledge.

6.1 Stories in the mat

In Aotearoa, and across the Pacific, mats continue to be part of everyday life for many indigenous peoples. They provide the foundation for wānanga and fono in whare nui and fale. They are places where we come together to talk, to reconcile and to reconnect. Finely woven mats of diverse patterns create room for the sacred space between us to be acknowledged and closed. Over days, years and generations, mats undergird our collective decisions and direction, and our talks long into the night.

While various mats from the Pacific now hang in galleries and museums, the true test of any mat is its utility. The mat of student success we endeavoured to achieve was never just about the looks. Our mat was always intended to be hardy, used, and useful, and to bear the evidence of the pitter patter of the feet of our younger and older students, their journeys and their paths across the mat. To truly honour the stories received from the literature, the data and our students, the mat needed to reflect those stories, to be functional and to be useful. Otherwise, it would just be any other mat, however beautiful in appearance.

In early 2021, with the final results for 2020 confirmed and the 2020 Te Kahui Pīrere and Imua initiatives complete, we have been able to analyse the data to see if the data-, literature-, and voice-informed initiatives we are providing are working. Although it is still early, Imua, stories of success are apparent in the mat.

6.2 2020 final grade and retention data

The 2020 cohort final grade and retention data was collected, collated, and analysed against our identified metrics of success. Customisable pivot tables of final cohort grade and retention data were created from My Reports with the following parameters:

- Students who identify as Māori, Pacific, or Māori and Pacific
- Undergraduate students
- First year of study in 2020
- Withdrawn and enrolled students
- Pass rates and pass rate quality (average GPA)
- Retention rates from Trimester A to Trimester B 2020
- Indication of when a student withdrew (to gauge the impact of COVID-19)
- Division
- Qualification
- Name, identification number and gender
- Domestic and international (most relevant for Pacific students)

Students with the following characteristics have been included in the data set:

- The student's first year in an undergraduate qualification at UoW is in 2020. This includes Degrees, Certificates and Diplomas but excludes Graduate Diplomas/Certificates and Foundation programmes (and any Postgraduate study).
- The student is enrolled in at least one Level 100 paper. This is to minimise the number of students who are included if they have transferred from another institution midway through their degree.
- To allow comparisons, flags have been included within the dataset, e.g. 'Is Māori', 'Is Pasifika', 'Is Māori and Pasifika', and Halls. While International students have been included, students studying at the Joint Institute (ZUCC) have been excluded.
- Qualification information has only been provided for the initial qualification that the student enrolled in. However, grade information has been included for all of the students' papers in 2020. This will mean that if the student transferred from one qualification to another the qualification will not appear in the data set, however the related grades will appear.
- All credit information has only been included for papers that start and finish in 2020, so that all papers have had grades confirmed.

Given that the cohort are first-year students, the most relevant metrics of success included withdrawals, pass rates, and retention from Trimester A to Trimester B rather than, for instance, qualification completion. We also wanted to drill down further into the data; for instance, to obtain a better picture of how well students were passing and not just whether they were passing, hence the need for pass rate quality as well. Given the

'black swan' nature of the challenges faced by the University and learners in 2020, the data could only be compared to previous years with great caution. For this reason and given that our purpose is to close gaps and disparities, it was more useful to compare cohorts within the same unprecedented year to other cohorts in the same year rather than to compare the same cohort to itself over multiple years.

The original data set created by our Business Analytics team was further customised to create multiple tables to compare learner success and the impact of the present Māori and Pacific amongst variations of these cohorts.

For the purposes of the pivot tables, we concentrated on the following cohorts of first-year students (New to UoW, Returning to UoW, New to UoW (non-school leaver)):

- Māori
- Māori in the Halls of Residence
- Te Kahui Pīrere – those who completed the programme and those who did not
- Pacific
- Pacific in the Halls of Residence
- Imua – those who completed the programme and those who did not
- Māori and Pacific
- Māori and Pacific in the Halls of Residence
- Māori and Pacific in Te Kāhui Pīrere and Imua

Further pivot tables and graphs were created from the original dataset to compare learners participating in the TKP and Imua initiatives with those who have not. Rates of success for first-year Pacific students have been compared to first-year Pacific students who participated in the Imua Learner Leader Initiative. Rates for first-year Māori have been compared with the rates of first-year Māori students who participated in the Te Kāhui Pīrere initiative. Given its enhancement, it offered a similar Māori cohort to compare with the Imua cohort.

621 General cohort tracking

First-year students at the University of Waikato in 2020

The University enrolled a total of 2,369 new students in 2020. New students included "New to UoW (School Leaver)", "Returning to UoW" and "New to UoW (Non-School Leaver)" categories. New students identifying as Māori totalled 729. Students identifying as Pacific totalled 222. Students identifying as both Māori and Pacific totalled 64.

First-year Māori, Pacific, and students who identify as Māori and Pacific in 2020

First-year retention rates for Māori are up from 60.1% in 2019 to 72.15% in 2020. Pacific first-year retention rates are up from 68.9% in 2019 to 76.58% in 2020. In 2020, Māori and Pacific student numbers also increased with similar improved rates of success in areas including paper completion rates at Levels 100, 200 and 300. Despite the challenges of 2020, the University has exceeded its targets for full-time student numbers and paper completion targets for Māori and Pacific, although these continue to trend behind other cohorts.

2020 Data	All first-year students[9]	Non-Māori, non-Pacific students	Māori	Pacific
Enrolled	2,369	1,482	729	222
Pass rate	81.47%	85.41%	76.41%	69.80%
Grade quality (GPA out of 9)	4.74	5.09	4.32	3.69
Retention from Trimester A to B	78.01%	81.17%	72.15%	76.58%
Withdrawals (as of 26 Aug)	2.03%	1.69%	2.47%	4.05%

Figure 6.1: UoW General Cohort Tracking data 2020.

[9] First-year includes "New to UoW", "Returning to UoW", "New to UoW (non-school leaver)".

Pass rates and retention

The average pass rate for all new students was 81.5%, with school leavers passing at an average rate of 85.2%, returning students at 65.4% and new non-school leavers at 79.3%. Māori passed at an average rate of 76.4%, with a school leaver rate of 78.9%, returning rate of 68%, and non-school leaver rate of 75.3%. Pacific passed at an average rate of 69.8%, with a school leaver rate of 72.9%, returning rate of 52%, and non-school leaver rate of 68.7%. Students identifying as Māori and Pacific passed at an average rate of 75.3%, with a school leaver rate of 73.4%, returning rate of 87.5%, and non-school leaver rate of 77.7%.

Māori students were retained from Trimester A to Trimester B at a rate of 86.5% for school leavers, 70.5% for returning students and 61.8% for non-school leavers. Pacific students were retained from Trimester A to Trimester B at a rate of 85.6% for school leavers, 66.7% for returning students and 68.9% for non-school leavers. Students identifying as Māori and Pacific were retained from Trimester A to Trimester B at a rate of 87.9% for school leavers, 100% for returning students and 73.4% for non-school leavers.

622 First-year Māori in various cohorts

There were 45 original participants in TKP in 2020. Of those, 38 fulfilled all the requirements to complete the programme. While the pass rates for Māori generally were 76.41%, Māori staying in the Halls were slightly better at 77.67%. The rates of those who completed TKP, however, eclipsed both the general and the Halls rates with 93.51% of those who completed TKP passing in papers, a difference of 17.1 percentage points. Those who completed TKP also showed a dramatic difference in pass rate quality, namely the difference between a B minus and an A minus. There were also no withdrawals for those who completed the programme during a trying year, which is comparable to the Halls where we know, anecdotally, that students receive more wrap around support. There were a few ghosts among those who did not complete the programme, however. Retention also improved.

623 First-year Pacific in various cohorts

There were 26 original participants in Imua in 2020. There were two students who withdrew from study on compassionate grounds in mid Trimester B. Numbers for those who did not complete Imua also

2020 Data	Māori	Māori (Halls)	Te Kāhui Pīrere (General)	Completed TKP	DNC TKP
Enrolled	729	184	45	38	7
Pass rate	76.41%	77.67%	77.63%	93.51%	25.00%
Grade quality (GPA out of 9)	4.32	4.31	4.76	7.46	0.92
Retention from Trimester A to B	72.15%	88.59%	79.17%	78.95%	80.00%
Withdrawals (as of 26 Aug)	2.47%	0.00%	2.16%	0.00%	11.80%

Figure 6.2: UoW First-year Māori in various cohorts 2020.

2020 Data	Pacific	Pacific (Halls)	Imua (General)	Completed Imua	DNC Imua
Enrolled	222	62	26	18	8
Pass rate	69.80%	73.64%	76.27%	86.57%	44.19%
Grade quality (GPA out of 9)	3.69	3.62	4.31	4.84	3.13
Retention from Trimester A to B	76.58%	88.71%	83.33%	95.24%	55.56%
Withdrawals (as of 26 Aug)	4.05%	3.23%	2.82%	0.00%	11.63%

Figure 6.3: UoW First-year Pacific in various cohorts 2020.

include ghosts. Three out of the six who did not complete were in the CUP programme, two were studying Science and one was doing a Bachelor of Arts. As in the case of Māori and TKP, the numbers for Imua showed positive jumps in most areas that also exceeded the Halls. Like TKP, the passing rates show a difference of 16.77 percentage points between Pacific overall and those who completed the Imua programme. Grade quality did get to the B range.

Retention averages improved dramatically by 18.62 percentage points for those who completed the programme with 17 out of 18 students being retained. Because Imua started in Trimester B, retention numbers reflect retention from Trimester B 2020 to Trimester A 2021. The numbers may signal the impact of the programme despite the delayed start of the programme in Trimester B.

624 First-year Māori and Pacific in various cohorts

To be thorough, we also looked at outcomes for students who were Māori and Pacific, and therefore eligible to participate in both TKP and Imua. Outcomes for students who were both Māori and Pacific were mixed. Generally, learners who were both Māori and Pacific had higher passing rates than students who were Pacific but other outcomes were incredibly mixed. However, numbers were, admittedly, not large enough in TKP and Imua to accurately gauge the impact of the programmes on learners of Māori and Pacific heritage at this time. We can draw general conclusions only. The Halls are clearly a plus for students with Māori and Pacific heritage.

625 Potential parity and equity indicators

The numbers in red demonstrate areas where Māori and Pacific learners in these programmes are doing better on average than non-Māori and non-Pacific students. Although some caution due to

2020 Data	Māori & Pacific	Māori & Pacific (Halls)	Māori & Pacific Halls (TKP)	Māori & Pacific Halls (Imua)	Māori & Pacific Halls (TKP & Imua)
Enrolled	64	21	2	3	1
Pass rate	75.30%	75.76%	75.00%	66.67%	50.00%
Grade quality (GPA out of 9)	4.26	3.60	5.00	3.29	1.88
Retention from Trimester A to B	79.69%	90.48%	100.00%	100.00%	100.00%
Withdrawals (as of 26 Aug)	6.25%	0.00%	0.00%	0.00%	0.00%

Figure 6.4: UoW First-year Māori and Pacific in various cohorts 2020.

2020 Data	Non-Māori, non-Pacific students	Te Kāhui Pīrere (General)	Completed TKP	Imua (General)	Completed Imua
Enrolled	1482	45	38	26	18
Pass rate	85.41%	77.63%	93.51%	76.27%	86.57%
Grade quality (GPA out of 9)	5.09	4.76	7.46	4.31	4.84
Retention from Trimester A to B	81.17%	79.17%	78.95%	83.33%	95.24%
Withdrawals (as of 26 Aug)	1.69%	2.16%	0.00%	2.82%	0.00%

Figure 6.5: UoW Potential parity and equity indicators 2020.

the small numbers is advisable, the outcomes for learners completing the TKP and Imua programmes suggest the following:

- Learners completing these programmes are experiencing outcomes that are not just meeting but exceeding parity with non-Māori and non-Pacific learners.
- Again, the low rates of withdrawals suggest that Māori and Pacific learners have been resilient during COVID-19.
- There is more work to do on pass rate quality for Pacific (which is less dramatic) but the figure is a vast improvement on the 3.69 for Pacific generally.
- The question may be how we increase participation and completion in TKP, TTP and Imua.

6.3 Some conclusions

Themes and patterns suggested by the cohort tracking data include:

- The continuing resilience of Māori and Pacific students during Trimester B 2020 post-lockdown.
- COVID-19's minimal effect on withdrawals – at least directly. The University's data on withdrawals showed that an overwhelming majority of Māori and Pacific students did not exercise the option to withdraw on the basis of COVID-19. However, Māori and Pacific had 2-3 times the withdrawal rate of other students. Possible factors which may have impacted some of the findings negatively include the delay in the launch of the Imua programme from Trimester A to Trimester B, as well as less tangible impacts of COVID-19.
- Although further work must be done, the University's personal approaches to student advisement, cultural responsiveness, and support systems may have also contributed to the ability of students to persist despite COVID-19.
- As numbers of Māori and Pacific students continue to grow, even during challenging times, it becomes ever more important to develop teaching and learning support to assist them in their success.

Ultimately, these outcomes suggest that our first-year Māori and Pacific initiatives that incorporate many aspects of our learnings from literature, data analytics and student voice are effective in improving student achievement, at least by these measures. Further exploration of various questions raised by these numbers may offer further insights, such as learning more about those who did not complete, why they did not complete, and ongoing concerns about ghosts. Larger cohorts might, of course, add depth and substance to the above findings. Examining the experience of specific cohorts including CUP students who did not complete and Halls students who consistently did fairly well, will also be useful.

7 | Ongoing learnings and application

E lawe i ke aʻo a mālama, a e ʻoi mau ka naʻauao (Hawaiʻi).

He who takes his teachings and applies them increases his knowledge.

7.1 What we have learned

Our aims were to:

- Develop institutional capability to create cohesive systems, programmes and experiences that are inclusive, culturally-responsive, rewarding and fulfilling for Māori and Pacific students.
- Establish teaching and learning initiatives and environments across the university that are informed by detailed data analytics, combined with a rich student voice.
- Produce research that would have tangible benefits for Māori and Pacific learners, families, iwi, communities and organisations, but also for tertiary institutions seeking to create transformative, institutional change to improve educational outcomes for Māori and Pacific learners.
- Provide evidence for, and better articulate, the impact of, data-, literature- and indigenous voice-informed learning support initiatives on such outcomes.

Although this is an ongoing process, we have developed:

- Greater institutional capacity through literature, voice, data and initiatives.
- Cohort-specific initiatives informed by the literature, data and student voice.
- Evidence of the impact of such initiatives on Māori and Pacific student achievement.

Given tertiary education's logarithmic potential to improve wider outcomes, we believe that these research outcomes will have positive implications for Māori and Pacific families, iwi, communities and other stakeholders and will also be of value to other tertiary institutions. In the meantime, the following learnings about ourselves, our systems, our teaching and learning, and the mahi we yet have to do will be very valuable to us as we seek to imua and go forward.

7.2 What success means for Māori and Pacific learners at Waikato

An important learning from the research has been a growing working definition of what our Māori and Pacific learners value and especially what they consider success to be.

For Māori and Pacific learners at Waikato, success can be expressed as:

- Success as Māori and Pacific people with identities, languages and cultures intact.
- Success as families, iwi and communities and the holistic wellbeing of families, iwi and communities, as in the Fijian word sautu.
- Intergenerational success that results in wider equitable outcomes and prosperity for Māori and Pacific families and communities.
- Disrupting racism and other forms of discrimination in classrooms and other learning experiences.
- Better informed, culturally-responsive teaching in classrooms.
- A sense of belonging in all aspects of education.
- Disrupting stereotypes, negative statistics, and deficit narratives.
- Setting an example and being a role model for those that come after.
- Success as peer groups and in student associations.
- Educational outcomes that result in not only gainful employment, home ownership and financial wellbeing, but also the chance to do good in the world and contribute to the success of others.

During the pandemic, everyday success included balancing family, work and community responsibilities and adapting study in a challenging environment. Longer-term success included completing qualifications, overcoming digital inclusion issues and intergenerational success despite intensified challenges.

7.3 Initiatives in development

The research has also highlighted the need to develop further initiatives that address other success factors which we could not address in this project. This includes the development of initiatives to support other cohorts of Māori and Pacific students and different parts of the student journey, and to improve teaching.

7.3.1 From Te Kāhui Pīrere

The development of a whanau model of student advisement for Māori students was also begun in 2020 and has since been implemented.

A first-year Whānau support model began in 2021 and is a model previously used by the Division of Education. This moves the focus from all students to first-year students as a priority. The key features of the model are:

- First-year students within divisions and Tauranga are grouped into Whānau. Most have chosen to group their students by degree or subject area although the idea of iwi-based whānau groups was discussed. School leaver/mature student whānau groups have also been discussed; an acknowledgement that some mature students may require targeted support.
- All first-year students will receive a phone call introducing the Māori Mentoring unit and inviting them and their whānau to the University pōhiri and Māori orientation activities.
- Each whānau group will have a whānau leader/mentor/tuakana who:
  - Helps to build relationships within their whānau by facilitating regular opportunities to meet.
  - Encourages them to participate in university, divisional, faculty, school or central Te Kāhui Pīrere activities.
  - Provides help with academic, pastoral or procedural matters.

Some Divisions have found it easier to implement the programme than others; however, those that have implemented the model find it to be improving levels of engagement.

> *This model, along with the provision of a Māori space in Tauranga has been beneficial to the building of community at the campus where previously this had been difficult. We have created space for students to build relationships with each other, with their Whānau leaders and staff and affirms to the students that they are part of a wider collective. Being involved with the programme has also helped some students with their sense of identity. (Tauranga staff member)*

First-year students will be asked to evaluate their experience within the whānau model at the end of the year.

7.3.2 Digital enhancement of the Imua Initiative

Based on our learnings last year, we have also been able to further develop the Imua Initiative in 2021. This included starting the programme prior to the A Trimester and integrating the previously separate Pacific Orientation into the programme to become the "Beginning the Voyage". The Imua programme was also 'digitally enhanced' in 2021, reflecting COVID-19 lessons. New features included:

- The ability to check-out and use digital devices – e.g. Chromebooks, set aside for the programme – while studying, where a need has been identified.
- A pre-teaching period Intensive Academic and Digital Skills Clinic.
- Regular check-ins with the e-Tuts team (Student Learning tutors who are also students offering IT and digital skills support to staff and students) between Seminars.

In 2021, far fewer students required access to these devices in our Imua programme, but we do not take digital access for granted. We are also working with Student Services and our IT team to improve mainstream assessment of digital needs early – that is, as part of enrolment for all students. We know that this is one way to remove any stigma and is consistent with everything we have learned about transitions and from COVID-19.

7.3.3 More data-informed initiatives

Other initiatives are now in development to support other Māori and Pacific cohorts and parts of the student journey. These include:

- A new, cultural competencies-based Māori and Pacific Teaching initiative, the He Iti, E Tasi Teaching Toolkit.
- Māori and Pacific STEM initiatives to engage high school students early in cultural legacies of success, mentoring and career, and study pathways advice.
- A new complementary, culturally-informed Pacific initiative to help students finish undergraduate degrees well, Calling the Island.

- Another higher learners' initiative, the Challenge the Horizon Higher Learners Initiative.
- Mātangireia, a cultural legacy-informed Māori and Pacific collection and learning space in the Library.

These initiatives seek to empower Māori and Pacific students as much as possible in their educational journeys as well as to educate and empower teachers, learning support and university leaders in not just cultural competency per se, but also cultural responsiveness and even leadership – that is, the knowledge and confidence to do things differently in their teaching and relationships with Māori and Pacific learners.

He iti, 'E Tasi Teaching Toolkit

For this reason, one of the most important initiatives in this group will be the He Iti, E Tasi Teaching Toolkit.

The name of this joint initiative reflects the Māori whakataukī, "He iti te mokoroa nāna te kahikatea i kakati" (Even the small can make a big impact on the big) and the Samoan proverb "E tasi, 'ae afe" (only one but worth a thousand). This initiative continues to be aimed at helping teachers to: maximise learner-centred approaches; realise the impact that one teacher can have on Māori and Pacific learner success; and develop data- and evidence-supported skills and competencies. It also continues to draw on feedback from student voice in the wānanga and fono, rich data sources, and what great teachers know and do, to empower teachers to create greater Māori and Pacific learner success in the classroom.

The project team feel it is important to go beyond a traditional series of workshops or seminars with teachers, which might not be attended by all staff. With the dissemination plan in mind, we wanted to create an initiative that was very practical, convenient, and easily accessible by a greater number of staff regardless of their schedule. We also wanted to create something that could be introduced to all new academic staff from the start but also be a valuable resource for existing staff. Only then would we be able to implement these initiatives across our organisation.

When complete, the toolkit will include:

- PDF and hardcopy versions of the final report on the project.
- PDF and hardcopy versions of an accompanying reflective planning guide for academic and teaching staff.
- Links to existing research and resources on teaching for Māori and Pacific learner success – including those at CeTTL.
- Videos featuring Māori and Pacific staff and students sharing "hacks" and insider perspectives on learner success.
- Videos of Māori and Pacific staff and students talking about participation in relevant initiatives.

Consistent with the ongoing priorities of the project, Māori and Pacific voices will remain prominent in these data-informed resources. The videos are already largely complete and feature Māori and Pacific students speaking for themselves in a fairly direct way. They are telling their own stories. The students featured simply responded to the call but provided a range of experiences. Coming from different cultural and linguistic backgrounds, they are articulate and real as they share not only moments of hope in what we are doing, but also somewhat touching examples where we need to improve in teaching and learning. Each student involved has demonstrated aroha/aloha, generosity and graciousness in their time, kōrerorero and talanoa. These are what non-Māori and non-Pacific teachers will have the chance to feel and learn from these resources.

These videos accompany this report and are available on the Ako Aotearoa website.

7.4 Institutional and strategic implications

Our research has already begun to inform key avenues for institutional change, for example, the Pacific Strategic Plan 2021-2025 (PSP) which was passed by the University Council on 15 June 2021 (see https://www.waikato.ac.nz/about/governance/strategic-planning/pacific). Two of the driving principles of the PSP are collective leadership and the smoothing of transitions and pathways, two principles informed by what we heard from

students in this project. For the first time, one of our strategic plans recognises the heterogeneous and complex relationships between Māori and Pacific peoples, the importance of families and communities to Pacific learner success, the educational aspirations of Pacific people, and a list of core Pacific values which will define the relationship between the university and Pacific learners, families and communities. Among other things, the university has committed to imua:

> *The ongoing purpose of the Plan is to imua – that is, to go forward and lead from the front in terms of Pacific learner, staff and community success. Implementing the Objectives will enhance a culture of belonging for Pacific students, staff and peoples, especially one that nurtures Pacific success, equity, diversity, inclusivity, and community. Like the Pacific navigators and voyagers of the past, we will be bold, courageous, smart, innovative, and collaborative in our efforts to create transformative progress and change (UoW, 2021, p 3).*

The *Draft UoW Te Rautaki Māori o Te Whare Wānanga o Waikato 2022-2027* (Māori Advancement Plan) has also integrated Māori identity, culture and language and anticipated tailored approaches to Māori learner success in an unprecedented way. As consultation and drafting continue on this plan, this report will bolster key aspects of the plan.

It will also bolster the University's ongoing efforts to address systemic factors that contribute to poor outcomes for Māori, Pacific and other cohorts of learners.[10]

Conclusion: Validation

Writing about her work to correct inaccurate histories depicting Native Hawaiians as passive against events that would result in educational underachievement for later generations, Silva (2004) wrote that: "When the stories can be validated … people begin to recover from the wounds caused by the disjuncture in their consciousness" (p. 3). Addressing the impact of colonisation and systemic inequities, gaps and disparities requires a validation of the experiences of Māori and Pacific students who have historically and chronically not been well-served by tertiary education in Aotearoa New Zealand and in many other education systems. As a university seeking to overcome these challenges, we needed to hear and validate those experiences for ourselves, to know the stories and to understand the texture, colour and weave of the mat for ourselves. Just as importantly, we had the chance through corroboration and reinforcement to validate the work of Māori and Pacific researchers and the voices of Māori and Pacific learners, parents and educators in the literature. Perhaps, the greatest validation of all has been the voices of our students, that have not only reinforced the data, but also shown that there are stories behind the numbers, adding greater texture and the pingao – the gold in the weave. Repeating patterns have spoken especially loudly.

As we seek to go forward, we know that we will need to continue to listen to our students, to hear their stories and to keep the kōrerorero and the talanoa going. In this way we will honour the weaving and the weavers, the learners and their families, the teachers and support staff who care and go the extra mile, and all those who weave people and instil confidence and a sense of belonging through education.

[10] During the last quarter of 2020, allegations of casual and systemic racism against the University were raised by Māori academics. A report by Hekia Parata and Wira Gardiner was commissioned by the University Council and its findings resulted in the establishment of a Taskforce to provide direction as to a way forward for the University. The Taskforce Report was presented to Council in April 2021 and a team has been established to develop and implement a work programme to achieve the end outcomes identified in the report. Some of the key findings of the research here have and will continue to inform the implementation of the Taskforce Report, particularly in the areas of teaching and learning.

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