Re-imagining student success: Integrating strategy and action through an indigenous lens

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ABSTRACT

Enhancing student success has been increasingly a focus for universities. But the context has changed, with complex challenges including a global pandemic, rapid digital transitions, and greater diversity with related inclusion needs. Creative thinking is essential to address what student success could (and arguably should) look like and be. In this paper we utilize Appreciative Inquiry to rethink current knowledge and practice. We refer specifically to our context in Aotearoa New Zealand, where data show that a change in approach is needed particularly for Māori students, Pacific students and other "new" learners. We explore a different way of working and learning – "mahitahi" – and argue that improving outcomes requires more than incremental or tactical shifts in action. We propose a re-imagining of diversity, inclusion and success for sustained transformation. Integrating indigenous approaches to knowledge into innovative frameworks, adapting future-focused curriculum and creative practice pedagogy in the process, could benefit all students across disciplines.

Key words: retention; belonging; Māori knowledge; diversity; studio teaching; learning futures; transdisciplinary curriculum; work futures

INTRODUCTION

Aim

A decade ago, McInnis et al. (2012: 9) advocated that 'student success – in all dimensions of their experience – is the paramount concern' for university learning and teaching leadership. The Higher Education Academy in the United Kingdom launched an enhancement framework with students at the centre, because 'helping students to transform their lives through higher education is what we are here to do' (HEA 2016: 2).

Improving outcomes warrants fresh thinking. Students surveyed globally in 2022 identified that support for their wellbeing is a priority; they expect diversity and inclusion to matter to their institution; they value belonging, flexibility and holistic support from application to graduation; and they want to be well prepared for the future of work. However, they have not necessarily had a 'great university experience', and retention/enrolments broadly are in decline (Salesforce 2022: 2-4).

Adapting indigenous perspectives is an opportunity to strengthen inclusion, belonging, flexibility and retention; and to support students as they prepare for work and other futures, with diversity and collaboration as a clear focus.

Separating indigenous knowledge from its owners should be approached with care and respect, but indigenous knowledge itself can evolve (Smith et al. 2016). Pedagogy can also

evolve through encouraging 'educators to develop structures and strategies that progress from the bottom up in order to benefit from the values, beliefs and ways of knowing within diverse local communities' (Nabaggala 2021: 129).

The indigenous knowledge and creative practice research nexus has been explored (e.g. Guntarik and Daley 2017). It has been argued that 'examining Indigenous creative knowledge systems can enable artists to experience not only an acquisition of content of Indigenous practices but develop a unique methodological Indigenous approach […] to the making experience' (Cameron 2022: 114). In the School of Art and Design at Auckland University of Technology, for example, students have also explored 'culture-based knowledge through creative design activity' (Feast and Hoshi 2022: 14).

The aim of this paper is to re-imagine how to support student success, by integrating traditional indigenous approaches to knowledge into innovative frameworks for whole-of-institution support, innovative curriculum, and transformational learning. The paper is intended to contribute to wider discussion of student success, within and beyond New Zealand.

Context

In Aotearoa New Zealand we have a treaty: Te Tiriti o Waitangi (Te Tiriti), the Māori text signed between Rangatira (tribal chiefs) and the British Crown in 1840 that establishes the basis for modern New Zealand society. Inclusion in education has been part of national and institutional policy and strategy reform; however, there has been little improvement in equitable outcomes for tertiary education (TEC 2021). There has also been little change in the proportion of indigenous educators and visible role models, and indigenous students may not feel they belong (McAllister et al. 2019; Naepi 2019; Tiakiwai et al. 2022). In 2021, research funding rules changed, aimed at boosting indigenous academic representation (https://www.universityworldnews.com/post.php?story=20210711113159556). It remains to be seen whether this outcome will be achieved, and over what timeframe; and if student perceptions change about educators' (often non-indigenous) identity.

Given that 'success for Māori students and Pasifika students is not only defined in terms of access, progression, qualification completion and graduate outcomes [but] also means contribution to family and community' (Longhurst et al. 2020: 5), our systems should accommodate the fluidity of students' lives. Completion of studies may require periods of exit and return to address family and community priorities. However, such breaks are seen as a failure of retention and can be costly: for the system, in failing to meet government performance indicators; and for students, in fees, living expenses, time, and missed employment (MacGregor 2020). While those who exit early might have experienced personal development at university, they might also leave themselves with 'debt and regret' (Norton and Cherastidtham 2018: 3) without a completed qualification.

Focus

Our key focus is two-fold. First, improving outcomes is vital for Māori students, Pacific students, and other "new" learners disadvantaged by limited opportunity such as pre-university academic performance (Burton and Dowling 2005) and competing demands of work, family and community (Amundsen 2019; Kauser et al. 2021). Second, we propose that all students (and therefore our future leaders) could benefit from inclusive practices and

frameworks integrating indigenous approaches to knowledge (Nabaggala 2021; Zambas et al. 2020).

Building equitable foundations for education will take decades, but what can higher education do *now*? What ways of being and thinking could transform higher education to extend its contribution to societal change and greater equity? What strengths could we harness for learning and teaching? Literature (or more accurately, what is absent) would suggest that such discussion has been limited or fragmented in New Zealand thus far – largely deficit or operation focused, albeit highlighting support for wellbeing (e.g. Joseph and Trinick 2021; Matear 2021). Notably, Tiakiwai et al. (2022) point out that listening to diverse student voices is essential for designing culturally-responsive, data-informed initiatives to support student success.

The global pandemic changed the context, reinforcing the impetus to innovate in support of student success. Like many, we have been exploring how best our university and sector could meet the new context, particularly for those most impacted (see Te Mana Ākonga 2020). There is an urgent need to meet bicultural obligations in New Zealand; and perhaps there are opportunities we have been blind to, or even suppressed (Smith 2021).

In this paper we address the process, findings and recommendations from an Appreciative Inquiry into reconsidering how we might move ahead, to deliver a better future for students. The scope of the paper is deliberately wide, aimed at holistic (versus fragmented) exploration of the many interconnected factors and complexity of "student success". Otherwise, the risk is that outcomes remain inequitable, and the potential for transformation will not be realized.

METHOD

An Appreciative Inquiry approach to change (Cooperrider and Whitney 1999) underpins the paper. We suggest this strengths-based (versus deficit-based) collaborative approach is a key transformative step in reconceptualizing student success and redesigning strategy to support it, with potential for 'changing how people think' (Bushe and Kassam 2005: 161).

Appreciative Inquiry involves reframing – realistically and positively – from where we are, toward opportunity (Armstrong et al. 2020; Cooperrider et al. 2008). Questions are explored collaboratively, with answers co-developed to strengthen positive action (Jansen et al. 2010).

The four stages of Appreciative Inquiry are:

1. *Discover* (the best of current thinking and practice);
2. *Dream* (thinking creatively about possibilities);
3. *Design* (a provocation for the future);
4. *Deliver* (a plan and action).

(Shuayb et al. 2009)

Ongoing exploration of student success literature was central to utilizing the Appreciative Inquiry process, while university workshops and other meetings were part of routine practice development and review.

A team of academics, academic developers and Māori knowledge experts at our university had developed "pilot" curriculum integrating Māori knowledge. Full evaluation of the curriculum case study was beyond the scope of this paper, but our ongoing reflections on the literature included drawing on observations of the case study – from Ka'ai (2021), Ka'ai et al. (2019) and Ka'ai et al. (2022a, b).

As co-authors of this paper, we followed the Appreciative Inquiry method in Peterson et al. (2018a): in our group discussions and reflections on the literature, including a case study, we shared our insights as experienced educators, researchers and leaders from different disciplines (education, communication, design, health) – *and* from different knowledge systems (indigenous, Western) – for collaboratively imagining future possibilities.

Consulting the literature focused on the following constructs, identified through our group discussion:

- higher education – learning, technology, pedagogy;
- student success – perspectives, imperatives, effective practice;
- retention – belonging, transition;
- Māori knowledge – collaboration.

Through synthesizing literature including practice examples, and reflecting on opportunities to incorporate indigenous perspectives, the paper responds to the following questions:

- What can we learn from the literature to inform improvement in outcomes for all learners in higher education, particularly Māori students, Pacific students, and others disadvantaged by background and the current tertiary system?

- Is there an opportunity to forge new ground in improving retention, by integrating indigenous knowledge with strategy and practice for future-focused education?

Through utilizing an Appreciative Inquiry process for reconceptualizing student success, and redesigning strategy to support it, we have:

- explored the literature for evidence-based examples of "good practice" – including influences such as culture, technology, and collaborative work practices (*Discovered* best practice);

- described a "pilot" case study of interdisciplinary curriculum development integrating indigenous knowledge and adapting creative practice pedagogy – in an art, design, communication, engineering, and computer and mathematical sciences faculty *(Dreamed* the possibilities);

- suggested how Māori knowledge can be integrated with practice to create different approaches to student success – spanning indicators, professional development, and learning and work futures (*Designed* a provocation);

- reflected on the literature, our experience, and our key learning from the case study observation – all of which informed development and refinement of two frameworks, with suggestions for adaptation by other institutions in different contexts (*Delivered* a plan and action).

In Key Findings and Recommendations, we drew on central ideas from Māori Knowledge and how they related to key themes in student success literature and approaches, with Mahitahi as a case study of practice.

THE APPRECIATIVE INQUIRY

Where we are

Educational Performance Indicators in New Zealand include rates for first-year retention, course (unit) and qualification (programme) completion, and progression to a higher-level qualification; and a Tertiary Education Commission imperative is that outcomes improve for all learners (TEC 2020).

Although 'good retention is a characteristic of a healthy higher education system and a major component of measures of student success in their higher education studies' (TEQSA 2020: ii), there is no universal standard for "good" retention. Terminology (retention/continuation versus attrition/non-continuation), benchmarks and approaches to measurement are varied, which makes comparisons of retention rates difficult between and within countries (HESA 2022; Hillman 2021; TEQSA 2017).

In New Zealand, there is a focus on continuous improvement by each institution according to their learners' needs (TEC 2022). The eight universities self-determine their specific goals and milestones in Learner Success Plans submitted to the Tertiary Education Commission.

The need to rethink strategy and improve is clear in Table 1, which represents students who commenced a bachelor's degree in New Zealand in 2019 and continued study in 2020; and those who commenced in 2020 and continued in 2021. The retention rate is the proportion of learners, after their first year, who enrolled in a qualification at the same level the next year. Students who moved to a different bachelor's degree at the same or different provider were counted nationally as retained.

Table 1: Bachelor's degree first-year retention rates 2020-2021 for domestic students at all eight New Zealand universities.

Ethnicity	**Part-time/Full-time**	**Retention**	
		2020	2021
All	All	**78.3%**	**78.6%**
All	Full-time	81.8%	81.7%
Māori	All	**72.2%**	**72.3%**
Māori	Full-time	76.9%	75.9%
Pacific Peoples	All	**72.5%**	**73.9%**

Pacific Peoples	Full-time	75.8%	77.2%

Source: Nga Kete Tertiary Performance New Zealand, Tertiary Education Commission (accessed 7 July 2022)

The percentages in bold highlight that retention is not optimal overall, and is inequitable for Māori, Pacific and part-time students, which is counter to the ōritetanga article (Māori having equal rights) in Te Tiriti. Worldwide, retention risks consistently include part-time study and being from a minority group such as indigenous and low socio-economic status (low-SES) students (US Department of Education 2016; Australian Department of Education, Skills and Employment 2017; Norton and Cherastidtham 2018; Universities UK 2019; MacGregor 2020; Education Counts 2021; Hillman 2021).

Stage 1 Appreciative Inquiry – Discover

Improving retention

A survey in Australia, France, Germany, Netherlands, Nordics, Spain, United Kingdom and United States of America identified the need for student connection; and that 'students who have a great onboarding experience are 35 times more likely to have a great overall university experience' with direct links to student satisfaction (Salesforce 2022: 4, 9).

A whole-of-experience lens was evident in institutional "good practice" characteristics for improving retention:

- appropriateness of students' preparation for higher education and how they are selected for admission;
- comprehensiveness of orientation and transition to higher education study;
- clear and user-friendly enrolment processes;
- design of the curriculum;
- early identification of students at risk of discontinuing their studies;
- academic student learning support;
- student welfare support;
- a sense of connectedness to the institution at which they are studying;
- how well different student backgrounds are catered for.

(TEQSA 2020: 7)

Timely advice is essential, including clear expectations for the discipline and university study, enabling prospective students to make an informed choice before commencing (Salesforce 2022; van der Meer et al. 2010). Pass rates in first year are a strong indicator of positive retention and completion for all groups of students (Earle 2018).

Belonging to a community of learners, self-efficacy, and perceived value of curriculum have remained 'key factors in student motivation' to stay the course (Tinto 2017: 2). Designing scaffolded curriculum without unnecessary barriers also supports progression within programmes; and responding to student feedback strengthens the likelihood of students persisting (Fullan and Scott 2014; Hoel and Dahl 2019; Wirtz 2022).

The pandemic exacerbated pressures on students, who frequently cite health and wellbeing as a key challenge and reason for exiting early. The New Zealand report 'Impacts of the Covid-19 Lockdown on Māori University Students' found that "lockdown" was a negative experience for Māori students because of: digital inequity and not having access to strong, reliable WiFi; lack of communication from their university; concern and anxiety about academic progress; and not feeling valued by their university (Te Mana Ākonga 2020).

In New Zealand universities, future-proofing should focus on technology readiness, sustainable assessment plans, and clear communication with students, with student wellbeing uppermost (Matear 2021). Progress has been made in online capability since the pandemic began (Holloway 2022; Matear 2021); and further research for improving student wellbeing is emerging, through embedding support in the curriculum while adapting pedagogy and assessment design (Upsher et al. 2022).

Belonging and transition

A strong focus on the first-year experience was a common theme in the literature, with 'a transition philosophy of engagement across academic, professional and administrative silos' (Nelson et al. 2006: 1).

> The first year must be foundational. It must lay down the learning platform for an end clearly in sight. It should foster a critical sense of belonging and student identity, through involvement and connectedness with the student's university and discipline experiences. It should facilitate the delivery of just-in-time, just-for-me tailored support, especially for time-poor students whose differing social and cultural capital on entry demands the equitable unpacking of the 'hidden' rules and expectations of and for learning success.
> (Kift 2015: 54)

The Belonging Project (https://sites.rmit.edu.au/dsclt/belonging-at-dsc/) began as a collaborative initiative of media, communication and design programme leaders and became an institutional strategic initiative of RMIT University. The concept was for integrated *transition-in* and *transition-out* experiences to foster belonging (Araujo et al. 2015; Morieson et al. 2013). Scaffolded curriculum facilitated development of a disciplinary, interdisciplinary and international professional identity.

Deakin University's Me in a Minute initiative supported student engagement by focusing on *transition-out* – building short videos to showcase students' capabilities (https://blogs.deakin.edu.au/meinaminute/#home). Central Queensland University's *transition-back* (re)connection belonging programme, with outreach by academic liaison staff, resulted in a '77 percent increase' in 2018 compared to 2016 for re-enrolment of low socio-economic status (low-SES) students after being on leave for one year (TEQSA 2020: 17).

In New Zealand universities, a sense of community with peer mentoring has remained vital, given the centrality of cultural identity for Māori (Airini et al. 2009). At the University of Waikato, peer mentoring has been encouraged along with small group work for collaborative learning (Tiakiwai et al. 2022). Initiatives to support first-in-family and low-SES students included the Auckland University of Technology (AUT) intensive 4-week UniPrep programme, combining study workshops with group activities to facilitate connection and

community (https://www.aut.ac.nz/uniprep). An integrated approach was also suggested at AUT to enhance a sense of "togetherness" for students:

> Improving student retention and success requires an environment which is welcoming and respectful of indigenous values and strengths. Strategies which encourage students to be self-empowered in their learning, ensure equity of opportunity, facilitate working together and enable the development of good relationships will meet the needs of all students, not just Māori.
> (Zambas et al. 2020: 1)

A need for institutional capability development was also identified (e.g. Tiakiwai et al. 2022), given that 'Māori pedagogical approaches enhance and improve learner experiences, they contribute to successful educational outcomes and often, have far-reaching implications for the learner that go beyond the course of study' (Sciascia et al. 2017: 11).

Adapting with technology

A decade ago, an 'avalanche' of change was predicted for fully online learning (Barber et al. 2013: 5). The pandemic took this to another level. There was little time to transition learning and teaching, or to reimagine student success in the new context.

Collective reflection-in-action emerged such as Advance HE forums in the United Kingdom (e.g. Hilliam 2020); 'Student Success in a Global Pandemic' in the journal *Student Success* (e.g. McKay et al. 2021); and the Times Higher Education webinar 'Understanding attrition: What can be done to reduce student dropouts post pandemic?' highlighting scaffolded learning and enabling "sociality" (Kift et al. 2021).

In 2022, the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Higher Education Conference in Spain emphasized inclusion and "just-in-time" upskilling for employees through flexible online learning (see Greenfield 2022; Warden 2022). The Times Higher Education webinar 'Redesigning the student experience in ANZ through digital transformation and collaboration' noted that students now expect flexibility for learning, given their competing priorities such as working while studying; and students appreciate personalized connection from their institution (https://www.timeshighereducation.com/campus/delivering-positive-student-experiences-anz-through-collaboration-and-digital-transformation).

Given that a flexible online/hybrid experience might be more appealing now than being fully on campus (Croucher and Locke 2020; Salesforce 2022), suggestions for educators have ranged from increasing online community interaction for students across universities, to designing challenge-based learning experiences and making prototypes for real-world assessment (Bashir et al. 2021; Ma and Lee 2021; McKay et al. 2021; Papageorgiou 2021).

A studio 'designed to enhance both online and face-to-face learning simultaneously through a technology-rich environment to facilitate visual and interactive team-based learning activities' can have positive outcomes for learners, including improved assessment grades and 'engagement, communication, motivation and professionalism' (Donkin and Kynn 2021: 135, 143).

Learning and work futures

Remote working increased significantly in the pandemic and is likely to continue (Naughtin et al. 2022). In the United Kingdom, a hybrid model (combining working from home and workplace) adopted by about one-fifth of workers can have benefits for employee wellbeing (ONS 2022a, b).

Business leaders in New Zealand have reported a digital skills shortage (https://tuanz.org.nz/digital-priorities-report-2022/). In Australia, the need for digital skill development is also predicted to continue growing: 'To keep pace with technological change, Australia will need around an additional 6.5 million digital workers by 2025 – an increase of 79% from 2020' (Naughtin et al. 2022: 33). Yet, students in a global survey have reported not feeling adequately prepared for work futures (Salesforce 2022).

Development of 'interdisciplinary and transferable skills' has been prominent, because 'employers value students' ability to learn new knowledge, operate across diverse knowledge landscapes alongside being adaptable and flexible' (Hains-Wesson et al. 2021: 3). Scaffolded learning and adaptive capability development were identified such as global design studios (Bohemia et al. 2009) and a transdisciplinary model to develop digital collaborative capabilities needed in industry (Peterson et al. 2020).

The *work relevance* of blended modes of communication and collaboration (such as virtual teamwork) underlines its *educational importance*, in terms of strengthening students' employability.

Summarizing this Discover stage of Appreciative Inquiry, we suggest that institutions (re)consider:

- improving connection with students for a positive experience, from their initial interest/application/enrolment onwards;

- exploring opportunities to embed support for wellbeing in the curriculum, pedagogy and assessment;

- refocusing on transition: helping students to belong (transition-in); prepare for work and other futures (transition-out); and return in flexible ways after early exit (transition-back);

- learning more about a Māori perspective on "togetherness", diversity and collaboration, and how to apply this to curriculum, pedagogy and other support for all learners;

- focusing on different flexible approaches to online and/or blended learning, to reflect the evolving needs and preferences of students;

- strengthening the connection between online collaborative learning and collaborative digital work practices.

Stage 2 Appreciative Inquiry – Dream possibilities

A case for integrating mātauranga Māori (Māori knowledge)

The ideas discussed above in Stage 1 inform approaches in New Zealand and elsewhere. Yet, despite the "good practice" documented in the literature over decades, and the best intentions of universities, student retention is not always optimal (Hillman 2021; MacGregor 2020) – certainly not in New Zealand (see Table 1).

What might we have missed that would make a difference to the retention of students and to their preparation for work and other futures?

We already know a strong focus is needed for enhancing the first-year experience, to increase pass rates and the likelihood of students persisting (Earle 2018; Fullan and Scott 2014; Hoel and Dahl 2019; Kift 2015; TEQSA 2020).

A positive indigenous identity is 'the steady factor driving Māori and Pacific students' achievement motivation' (Mayeda et al. 2014: 165). Encouraging and listening to Māori and Pacific student voices on what "success" means to them is therefore vital (Tiakiwai et al. 2022).

Rather than 'problematizing' diversity, Kift (2015: 51) advocates shifting focus to the curriculum and learning experience students have in common, in addition to continuous improvement for a range of support activities.

As part of UNESCO's focus on education futures, a key finding of a study on how students want universities to change, is that "connectivity" is vital – given that 'students want to become better communicators and collaborators to thrive in a technologically interlinked world where learning runs through their entire lives' (Abdrasheva et al. 2022: n.pag.).

Could curriculum, pedagogy and connectivity be strengthened with an indigenous lens – to address learning and work futures, *and* to improve the learning experience and outcomes for all students?

Mahitahi: case study

"Mahitahi" is a Māori concept, which means working collaboratively in and with diversity. At the Auckland University of Technology, 'Mahitahi: Collaborative Practices' is a 12-week course (unit) in bachelor's degree programmes in the Faculty of Design and Creative Technologies. This first-year course privileges Indigenous Māori knowledge, using a distinct Māori framework relating to digital work futures.

Students form interdisciplinary project teams to investigate an issue through an indigenous Māori lens. In the process, they learn ways to collaborate from a mātauranga Māori (Māori knowledge) perspective. The project approach resonates with calls from employers for collaborative inter/transdisciplinary and adaptive capability development (Hains-Wesson et al. 2021; Peterson et al. 2020).

Te kete mātauranga (a knowledge basket) is designed to help the students "unpack" what mahitahi looks like. Te kete mātauranga consists of cultural concepts from te ao Māori (Māori world/world-view), pūrākau (stories) and whakataukī (proverbs). Pūrākau contain

‘philosophical thought, epistemological constructs, cultural codes and worldviews’ (Lee 2009: 1). Cultural narratives about the practice of mahitahi, embedded in the pūrākau, foster in-depth discussion by students to deconstruct key messages. Whakataukī (proverbs) are shared with students to explore the symbolism and connections to collaborative practice.

Te Ipukarea Research Institute (http://www.teipukarea.maori.nz/) has coordinated the course since 2021 and developed the Māori content to ensure authenticity, accuracy and consistency. Each pūrākau has been prepared as an online resource, as an integral component of a Māori approach to learning – “Titiro, Whakarongo, Kōrero” – which invites learners to observe and listen to develop understanding, before discussing and acting (Dr Rachael Ka'ai-Mahuta, Personal Communication 2022).

The course aims to strengthen students’ confidence and ability to share their own stories and cultural origins (inspired by the Māori content) and potentially reveal similarities between their cultures and te ao Māori (Māori world/world-view). The intention is to break down barriers and build collegiality between students, who are encouraged to interpret the pūrākau from their own worldview. This creates a space for peer learning and co-reflection.

A team-teaching approach has been adopted. One Māori teaching alongside a Pākehā or Tauiwi (non-Māori) has enabled authentic co-exploration of mātauranga Māori (Māori knowledge) in an interdisciplinary context. Embedding mātauranga Māori in the curriculum, pedagogy and assessment has become a collaborative learning experience, affirming and empowering Māori and non-Māori students and educators. This expression of tauutuutu (reciprocity, the relationship at the core of learning) – through adopting tuakana-teina (peer mentorship) and whanaungatanga (building of respectful relationships, belonging) – models what a Te Tiriti relationship can look like.

Mahitahi Model

Embedding Māori worldviews in pedagogy has transformational possibilities (Pihama et al. 2019). If educators use Māori conceptual frameworks in their teaching practice, it positively contributes towards Māori learners’ success and benefits other learners (Tahau-Hodges 2010).

Figure 1 below illustrates that Māori concepts and cultural practices are central to the Mahitahi Model.

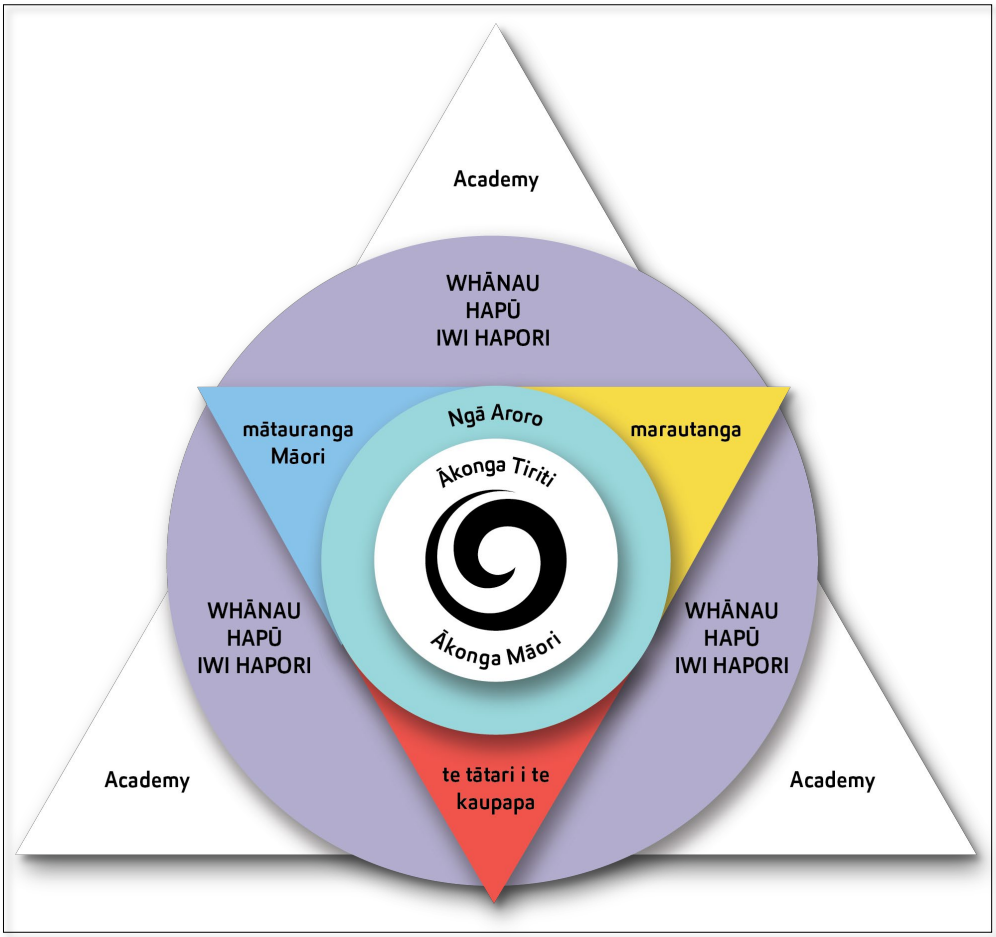

Figure 1: Mahitahi Model.
Source: Adapted from Ka'ai et al. 2022b.

Figure 1 illustrates that Māori concepts and cultural practices are central to the Mahitahi Model. Concentric circles and triangles are colour coded, to represent distinct but connected components of the Model.

In Figure 1, the broader academy is reflected by the outer triangle because the Mahitahi Model is hierarchical in its origins. In the centre in black is the Māori student (Ākonga Māori) in a stylised double spiral image, with the white shading of the spiral representing the non-Māori student (Ākonga Tiriti). This symbolizes a student-centred philosophy embedded in a Tiriti relationship.

In the purple shaded circle, the whānau (family), hapū (sub-tribe), iwi (tribe) and hapori (community) surround the students, to reflect the importance of nurturing and supporting their tamariki (children). While non-Māori students will not necessarily embrace hapū or iwi, they could identify with family as a kinship unit within their hapori.

The inverted triangle within the larger outer triangle reflects how power is shared between the student and the educator, because mātauranga Māori is about the wellbeing of the collective – in this context, both Māori and non-Māori students at the centre of the process. Everything within the larger circle surrounding the students reflects factors involved in the student-

institution-community relationship. The smaller triangles represent Māori knowledge (blue), curriculum (yellow), and assessment (red).

The teal-green shaded circle includes Māori pedagogical practices, summarized in Table 2.

Table 2: Ngā Aroro Māori: Māori pedagogical practices and concepts.

Māori concept	Meaning
Ahurea tuakiri	Cultural identity
Ako	To learn/teach
Āta	To be thorough and deliberate; professional
Atawhai	Kindly, kindness
Harakore	Honesty
Kōrero pono	Truthful
Māhaki	Humility; tolerance
Mahitahi	Working collaboratively in and with diversity
Manaakitanga	To be caring and show generosity to others
Mānawanawa	To be patient and to show patience
Ngāwari	To be tolerant
Oranga tonutanga	Continued wellbeing
Pūrākau	Storying
Tautoko	To support
Tauutuutu	A commitment to reciprocity
Te reo Māori	The Māori language is a carrier of culture
Tiakitanga	Trust
Tikanga	Customary lore, informs our behaviour, correct protocol or procedure
Titiro, Whakarongo, Kōrero	Observe, listen, speak is a process of seeking to understand before speaking
Tuakana-Teina/Taina	Older sibling/younger sibling relationship like peers helping each other; peer mentorship
Tuakiri tangata	A person's personality including traits such as mauri (life essence), wairua (spiritual essence), whatumanawa (deepest emotions), iho matua (deepest spiritual essence), tinana (body), hinengaro (mental capacity of learner), pūmanawa (learner's potential), auaha (creative side of learner)
Wānanga	To meet, discuss, consider, deliberate, reflect, build knowledge together, often in a context such as a noho (overnight stay or for several days and nights)
Whakamana	Empower
Whakatīaho	To be transparent
Whakaute	To be respectful and show respect
Whakawhanaungatanga	Togetherness; process of establishing relationships

Whanaungatanga	A willingness to build relationships through shared experiences; creating a sense of belonging
Whakamanawa	Encourage, inspire confidence

Source: Adapted from Ka'ai et al. (2019).

Stage 3 Appreciative Inquiry – Design provocation

Impact

Integrating indigenous knowledge as a way of thinking about student success could be transformative. The Mahitahi Model (Figure 1) provides insights on how to support Māori students, Pacific students and other learners to be successful in academia. Metrics of "success" also 'must reflect how Māori and Pacific learners measure success to be more equitable' (Tiakiwai et al. 2022: 18-19).

Although student success initiatives are often in place, 'many providers have difficulty demonstrating whether particular initiatives have worked' (TEQSA 2020: 4-5). Analysis of effectiveness and impact is emerging, for example, in New Zealand (Eather et al. 2022; Tiakiwai et al. 2022). However, measuring the impact of initiatives is traditionally limited to somewhat reductionist indicators in the sector, or is absent; and 'what success means for Māori students and Pasifika students needs to be reflected in evaluation' (Longhurst et al. 2020: 5).

This challenges the status quo, in terms of culturally appropriate indicators. Student achievement is clearly not limited to completion of a course (unit) or programme (qualification). Every part of the experience – from initial contact to time at university – contributes positively or negatively to a student's life and future.

A case for mahitahi

The collaborative approaches of mahitahi are centred on shared power relationships and collective solutions (Abraham 2021; Ka'ai et al. 2022b; Pihama et al. 2019).

Although there are dedicated Māori tertiary organizations, most Māori students are in mainstream universities. Data (Table 1) highlight that they struggle to make cultural and educational practice shifts to strategically improve Māori learner outcomes (Hohepa 2010; McKinley and Hoskins 2011; Wilson 2017). Māori students continue to have a complicated relationship with non-Māori educators, leaders and those in charge, because education tends to privilege and posit Western knowledge and values over mātauranga Māori ways of learning, teaching and research.

Policies and strategies are not enough to bring about meaningful change for inclusion (McAllister et al. 2019; Naepi 2019). The professional development of educators is a key step in ensuring action (Amundsen 2019; Tiakiwai et al. 2022). In an undergraduate course such as Mahitahi: Collaborative Practices, the Māori and non-Māori educators model mahitahi as they work together to embed mātauranga Māori in the curriculum, pedagogy and assessment. Through engaging in authentic, collaborative, deep learning as professional development, the educators' own 'knowledge is situated, being in part a product of the activity, context, and

culture in which it is developed and used' (Brown et al. 1989: 32). This approach goes well beyond a standard professional development workshop.

Our learning so far about embedding mātauranga Māori (Māori knowledge):

- The relevance of mātauranga Māori in the learning and teaching environment is evident through adopting culturally responsive methods that encourage cultural identity, sense of place and belonging.

- Mahitahi as a pedagogical concept – underpinned by Māori philosophies, worldviews and values – celebrates and capitalizes on diversity in collaboration.

- Professional development for embedding mātauranga Māori in curriculum, pedagogy, assessment and support through authentic situated learning reflects Māori pedagogy – where Māori and non-Māori work together on a shared endeavour, with peer mentoring for collective educational goals/benefit.

- Māori and non-Māori student voices are vital to inform development of "success" indicators, which acknowledge and "count" what matters most to students, as well as institutions/other requirements.

- Adopting a Māori approach to learning – "Titiro, Whakarongo, Kōrero" – means the learner (in this case, the institution) observes and listens to develop understanding, before discussing and taking action.

The sector is motivated to deliver better outcomes – not only because failing to do so impacts on revenue, but increasingly (we sense) because a mature sector knows it is the right thing to do. Yet, we continue to struggle to deliver. The majority of shifts to date (isolated tactics, frequently lacking integration) and a reductionist approach to analysis of impact have likely limited *our* success.

In New Zealand, the Tertiary Education Strategy sets the long-term vision, prioritizing: learners at the centre; barrier-free access; quality teaching and leadership; future of learning and work; and world-class inclusive public education (Ministry of Education 2020). This signals opportunities for innovative integration of indigenous concepts in higher education – strategically harnessing interconnections within institutions *and* adapting connectivity approaches for learning and work futures.

Stage 4 Appreciative Inquiry – Deliver

Whole-of-experience strategic framework

In Table 3, Learning/Academic, Engagement, and Data dimensions are grouped thematically. If the "whole experience" plan is not co-designed to ensure such interconnections, the weakest components of the plan may compromise the student experience and impact negatively on outcomes.

Table 3: Features of plans to support student success – interconnected dimensions.

Features	Learning/Academic	Engagement	Data
Goal	Academic learning communities, dialogue, collaborative learning, empowered learners.	Academic, professional, social, personal, resilience development for students.	Connected and adaptable systems, datasets.
Processes	Clear programme structures. Clear enrolment options. Manageable workload. Clear and fair assessment.	Access and equity, student involvement, positive onboarding, personalization. Timely advice, clear communication. Fair, efficient, flexible processes and rules. "At risk" student outreach.	Diversity/participation, partnership. Enrolments, attrition, retention, completion, pass rates: institution, programmes, majors, courses/units. Students at risk.
Belonging	Culturally appropriate curriculum with professional and community/family contributions. Inclusive, indigenous, innovative, scholarly, interactive, blended learning and teaching practices including assessment. Scaffolded support, resources; approachable teachers. Professional development for academics; situated peer learning for quality teaching including indigenous knowledge.	Belonging initiatives, welcoming safe space. Transition-in, transition-out, transition-back focus. Indigenous identity, values, language(s). Indigenous community/family and university role modelling. Peer mentoring; academic support for students. Personal and social support services.	Student feedback. Belonging, transition initiatives. Evidence-based decision making and interventions for improvement. Data analytics to measure impact for reporting. Continuous improvement to support student success.
Outcomes	Curriculum design: future focus on employability, further study, other aspirations. Work-integrated learning and assessment, industry input, flexible part-time study. Professional learning continuum (university/work).	Industry partnerships to support employees in part-time study, work integrated learning. Career services, resources, opportunities.	Employability, further study. Other "success" outcomes from diverse student perspectives. Clear benchmarks met or exceeded.

Source: Adapted from a wide range of sources outlined below.

We developed this whole-of-experience strategic framework by drawing on our experience as educators and leaders, while synthesizing and adapting the following ideas:

- identity, indigenous approaches to knowledge and values (Airini et al. 2009; Zambas et al. 2020), with belonging and transition initiatives (Kift 2015; Nelson et al. 2014) and indigenous learning and teaching approaches (Mayeda et al. 2014);

- equity, positive onboarding and ongoing connection for diversity and engagement (HEA 2016; Salesforce 2022) alongside social support, resources, development opportunities, curriculum and assessment (Han and Rideout 2022; HEA 2016) and re-imagining professional learning (Peterson et al. 2018b);

- adapting creative practice pedagogy for employability (Peterson et al. 2018a), and authentic professional development for academics and other staff through situated peer learning (Brown et al. 1989) for embedding indigenous knowledge in curriculum, pedagogy, assessment and support;

- using data to inform initiatives, and evaluation in culturally appropriate ways, with students at the centre (Longhurst et al. 2020; Nelson et al. 2014; TEQSA 2020; Tiakiwai et al. 2022).

Connectivity for learning and work futures

Students have called for connectivity to be uppermost in higher education design, so they can build capability in online communication and collaboration for the interconnected digital world (Abdrasheva et al. 2022; Salesforce 2022). Industry has also called for strengthening connectivity and adaptive digital capability. Participants in a design industry roundtable at the University of Technology Sydney, for example, identified the need for digital and professional networking skills to be embedded in learning designs, as students prepare for workplace 'ecosystems' (Crosby et al. 2020: 29).

Leading creative practice pedagogy futures warrants ongoing exploration and development of diverse contemporary models to support learners (Peterson et al. 2015).

The Connectivity Scaffold proposed (Table 4) addresses learning and work futures in a culturally appropriate way. We embedded both mātauranga Māori (Māori knowledge) and adaptive digital capability development "by design" in a new approach to collaborative blended learning – explicitly fostering "connectivity" in interpersonal, intercultural, interdisciplinary, institutional, technological, educational and professional practice ways.

Table 4: Connectivity Scaffold.

Stage	Digital component	In-person component
1	Equitable and accessible online resources provided for each course. Generic online resources across the university such as welcome, study skills, learning management system orientation, introductory project management skills, communication skills e.g. teamwork, presentations, giving/receiving feedback.	*Transition-in* focus on belonging and sociality for all students, with affirmation of indigenous identity. Foundation activities mapped to curriculum to develop course-specific capabilities, creative/cultural competencies, and communication, collaboration, enterprise, job-seeking skills. In-person discussion, peer learning, collaborative sense-making.
	Students experience online collaborative learning activity in first-year core course e.g. presenting work online for peer critique. In addition, online or blended learning for inter/transdisciplinary team projects embedding indigenous knowledge. Focus on functional digital capability *(what/how-to of using technology)* – for collaboration, and for course content and profession.	Collaborative learning activities, within and across disciplines; team projects embedding indigenous knowledge. Peer learning and mentoring, reflection and feedback to support development of students' work futures and bicultural capabilities – through embedding indigenous knowledge and application of mahitahi concept (working collaboratively in and with diversity) in a compulsory course/unit.
2	Online studio, project or other activity, building digital knowledge. Focus on perceptual digital capability *(why/when of using technology with available resources to achieve particular outcomes)* – for collaboration, and for course content/profession.	Collaborative deep learning activities, within and across disciplines, including team projects with industry/community clients. Reflection and feedback to support development of students' industry/professional knowledge, building on indigenous knowledge.
3	Capstone professional practice experience e.g. online international work-integrated learning project, or industry project/studio. Individual and collaborative deep learning: critical thinking, reflection and synthesis of advanced application of digital knowledge and mahitahi. Focus on development of adaptive digital capability *(what-if/imagination of using technology in new ways)* – for collaboration, and for course content/profession.	*Transition-out* focus on practical experience in local studios, placements or internships, or on-campus advanced projects with industry/community input. Inter- or transdisciplinary professional practice e.g. international placement, industry study tour or studio. Individual and collaborative deep learning: critical thinking, reflection and synthesis of advanced application and adaptation of mahitahi.

Source: Adapted from a wide range of sources outlined below.

We designed this Connectivity Scaffold to support development of bicultural and inter/transdisciplinary adaptive digital capabilities, again by drawing on our experience as educators and leaders, while synthesizing and adapting the following ideas:

- the development of *bicultural capabilities* for all students focuses on indigenous identity, sense of community, peer mentoring, and application of mahitahi (Airini et al. 2009; Ka'ai 2021; Ka'ai et al. 2022a, b; Zambas et al. 2020), underpinned by deep learning and a transition philosophy (Fullan and Scott 2014; Kift et al. 2021);

- the development of *inter/transdisciplinary adaptive digital capabilities* through collaboration, exploration and critical reflection on and in action (Abdrasheva et al. 2022; Best 2009; Crosby et al. 2020; Digital Work Practices Project 2018; Hains-Wesson et al. 2021; Peterson et al. 2020; Schön 1983);

- building on Peterson (2016) and Pond et al. (2019): the *integration* of bicultural capability development with digital capability, employability and mobility, through a social constructivist/student-centred developmental learning design (Biggs and Collis 1982; Weimer 2013) and adapting an interactive blended learning studio model (Donkin and Kynn 2021; Zehner et al. 2009) for curriculum that is relevant to students' futures (Tinto 2017).

Using the Connectivity Scaffold: suggestions for institutions

We suggest a systematic and explicit approach for programme teams using the Connectivity Scaffold – to map belonging initiatives and online/on-campus modes, re-imagined through indigenous and digital work futures lenses for innovative practice. By adopting a strengths-based approach, teams could identify what has already been developed successfully in their programme, and any gaps.

The following sample questions are suggested for focused discussion in universities:

- Have we achieved a baseline of online belonging and wellbeing initiatives in our courses (units) and the wider university?

- Have we achieved equitably accessible online resource provision for our courses?

- Does timetabling enable students to engage in ways that allow them to fulfil their external whānau (family) and community responsibilities?

- Do we have flexible opportunities for studying in different ways and times e.g. work-based learning and assessment for employees, to meet their work commitments and benefit the student and their employer?

- Do we have appropriate professional development programmes in place to support educators and other staff in their own learning about mahitahi (working collaboratively in and with diversity)?

- Do we have an online support programme for students to connect with other students – where tuakana-teina relationships (peer mentoring) can occur and students do not feel alone in their learning?

- Do our programmes include developmental learning for in-person, digital and inter/transdisciplinary collaboration?

- Do our programmes assess in-person and digital work practices, through indigenous and work futures lenses?

- Are graduates ready to work in a digital environment, including communication and collaboration across national, organizational and/or disciplinary cultures?

- Can students articulate their digital work capabilities to peers, educators, community and prospective employers? See Digital Work Practices Project resources: https://sites.rmit.edu.au/digitalworkpractices/case-studies/

- Can students articulate their collaborative work capabilities, in relation to diversity and inclusion in the contemporary workplace – working collaboratively in and with diversity?

KEY FINDINGS AND RECOMMENDATIONS

Māori knowledge: adding to the field for student success

Students and educators worldwide have called for a stronger focus on diversity, inclusion and wellbeing in higher education. The Māori concepts discussed in this paper can be applied and adapted by others, or prompt consideration of different indigenous/intercultural perspectives.

The wellbeing of the collective is integral to mātauranga Māori (Māori knowledge). Whakawhanaungatanga (togetherness, process of establishing relationships) and wānanga (meeting, sharing, discussing, reflecting, building knowledge together) underpin and inform the partnership philosophies of mahitahi (working collaboratively in and with diversity).

Key to mahitahi are: whanaungatanga (willingness to build relationships through shared experiences, sense of belonging); the cultural pedagogy of tuakana-teina (peer mentorship); and manaakitanga (a caring process entwined within building respectful relationships, required to build self-belief and confidence in learners). These concepts go beyond Western approaches to learning, collaboration, and student support.

In the higher education literature, there has been considerable exploration of curriculum design, digital/in-person collaborative learning, the studio model of learning and teaching (a creative community culture), and collaboration (inter/transdisciplinary teamwork) for employability. But all these topics are not necessarily addressed in “student success” literature, as this paper has.

Student success literature often focuses on inclusive learning and teaching, engagement, academic support, and transition/belonging initiatives for improving performance indicators including retention, pass/completion rates and student satisfaction. Particular studies have focused on Māori approaches to support indigenous and other students to learn, belong and "stay the course". But mahitahi has not been discussed widely in student success literature.

The case study of Mahitahi: Collaborative Practices illustrates how Māori knowledge adds to the field for student success – building on curriculum design, collaborative learning, teamwork and studio projects, *and* inclusion, transition and belonging approaches:

- Students have the opportunity to develop deep insight into a Māori world view and mātauranga Māori through pūrākau (stories and storying), handed down from generations by whānau (family), hapū (sub-tribe) and iwi (tribe), to provide a Māori response to the world we live in. Implicit in the storying are core cultural values and concepts, which inform and nurture specific behaviours in the socialization of the collective.

- Students can develop understanding about the significance of being creative and innovative; and the importance of conflict resolution, listening to others' opinions, working collaboratively to achieve goals and desired outcomes, solving problems and challenges, and bringing lived experiences into the conversations. Then through projects, students can explore and navigate a group response which reflects this learning (knowledge and skills) gleaned from the pūrākau. Māori and non-Māori students work together and peer mentoring is encouraged, which can be affirming.

- A significant outcome of this approach is whakawhanaungatanga (togetherness), where students have developed relationships along the way that are often diverse in gender, discipline *and* ethnicity. Everyone has a role to play in achieving the shared goals. Three important aspects of this learning process are: partnership, which reflects Te Tiriti o Waitangi; tolerance of difference; and shared responsibility for projects.

- Crucially, learning about mahitahi supports students' preparation for professional practice, including collaborative work responsibilities for the contemporary workplace "collective" – where diversity and inclusion are increasingly an *organizational focus*.

Mahitahi is also exemplified in a professional development model for educators, emphasizing peer mentoring – where Māori and non-Māori educators collaborate to embed Māori knowledge in curriculum, pedagogy and assessment. Māori "togetherness" includes a strong sense of co-responsibility for helping each other (especially novices), where mutual support is for the "collective good".

Learning experiences and belonging initiatives can be nuanced by students, educators and support staff reflecting on Māori knowledge, particularly mahitahi – to support students *transition-in/out/back*, and to empower them to *help shape* equitable opportunities and inclusive outcomes in higher education and beyond.

Future focus

We propose a re-imagining of diversity, inclusion and success, with mahitahi at the heart of transformation. Diversity should be welcomed and utilized to do things differently. Authentic collaboration also takes a willingness to engage with diversity, in ways that challenge or overturn deficit models. It is important to reiterate – for success, we do not consider it sufficient to "add on" such an approach; rather, it requires a whole-of-experience plan, with strong interconnections between its Learning/Academic, Engagement, and Data dimensions (Table 3).

We recommend focusing explicitly and systematically on the curriculum and connectivity (Table 4). "Connectivity" encompasses cultural, inter/transdisciplinary and digital dimensions. Traditional indigenous thinking (in our case, drawing on mātauranga Māori) can help shape curriculum design and the learning experience in an innovative way – through supporting students as they prepare for work or other futures, in which connectivity is central.

Where attempts to improve outcomes for student success have been rushed, limited or fragmented so far, we can make a difference in future by systematically embedding indigenous knowledge in strategy and practice. Not doing so, at best, risks maintaining the status quo. True partnering and reciprocity is fundamental to building cultural capability and capacity. We propose a shift from tactics to transformation, from deficit to diversity, for change leadership rather than status quo.

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