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A JOURNEY THROUGH PUAKA MATARIKI,
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CULTURE-CENTRED DESIGN

Denise Narciso and Taryn Ormsby

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WAKA WHETŪ: A JOURNEY THROUGH PUAKA MATARIKI, PROJECT-BASED LEARNING, AND CULTURE-CENTRED DESIGN

Denise Narciso and Taryn Ormsby

Me mātau ki te whetū, i mua kōkiri o te haere.
(Before you set forth on a journey be sure you know the stars.)

Design education in Aotearoa New Zealand is undergoing a significant transformation – one driven by the need for cultural responsiveness, authentic engagement and learning experiences immersing students in real-world problems, connecting them to their place and their community.¹ Within the Communication Design programme at Otago Polytechnic, there is a growing expectation to embed ethical frameworks that enable students to practise responsibly as designers in a bicultural context. Our programme is increasingly committed to working meaningfully with minority communities and placing Māori at the centre of decision-making. This approach ensures mana whenua have genuine authority in shaping how cultural concepts are represented in project outcomes. By making space for Māori perspectives – voices that have historically been underrepresented in a Eurocentric design curriculum – we move toward more authentic, inclusive and grounded design practices.

In navigating this evolving landscape, we turn to the stars – both metaphorically and literally – that have long guided journeys across moana (oceans) and whenua (land).

Waka Whetū – a collaborative exhibition developed by third-year Communication Design students at Otago Polytechnic in partnership with Tūhura Otago Museum – served as a navigational tool in this journey. The *Waka Whetū* project offers a case study for how design education can engage with Indigenous knowledge systems while fostering contemporary creative practice. It exemplifies the potential of design to act as a bridge between cultural narratives and pedagogical innovation.

In Communication Design at Otago Polytechnic, Project-Based Learning (PBL) forms a core component of the curriculum in the latter stages of the degree. PBL is a student-centred model grounded in constructivist principles: learning is context-specific; students are active participants in their learning; and knowledge is co-constructed through social interaction.² More specifically, PBL is recognised as a form of inquiry-based learning in which authentic questions and real-world challenges provide the context for deep and meaningful educational experiences.³

In Semester 1, 2024, third-year Communication Design students at Otago Polytechnic developed an interactive experience exploring Puaka Matariki – the Māori New Year – through visual storytelling, digital media and installation design. Their aim was to illuminate the cultural and astronomical significance of this star cluster, creating a platform that fostered both academic inquiry and public engagement. At the heart of *Waka Whetū*, the resulting exhibition, was a pedagogical approach informed by two interwoven frameworks: High-Quality Project-Based Learning (HQPBL)⁴ and Culture-Centred Design (CCD), as articulated in the Indigenous Design and Innovation Aotearoa (IDIA) Toolkit.⁵



Figure 1. High Quality Project-Based Learning infographics designed by Denise Narciso.

The High Quality Project-Based Learning (HQPBL) framework (Figure 1) developed by the Buck Institute for Education expands on this foundation by identifying six key elements that distinguish impactful project work from more superficial or activity-based learning:

1. **Intellectual challenge and accomplishment**, which ensures engagement with complex ideas and critical thinking;
2. **Authenticity**, which connects projects to real-world issues, contexts, and communities;
3. **Public product**, which extends the learning beyond the classroom and into community-facing outcomes;
4. **Collaboration**, fostering teamwork, communication, and shared ownership;
5. **Reflection**, encouraging learners to critically examine their processes and outcomes; and
6. **Project management**, which develops students' capacity to plan, organise, and sustain progress over time, including goal-setting, time management, and task coordination.

Together, these dimensions scaffold project work that is considered to be rigorous, relevant and resonant with the world students are preparing to enter.

Running parallel to this educational framework in the *Waka Whetū* project was Culture-Centred Design (CCD) (Figure 2), a design methodology grounded in Indigenous-led knowledge systems and relational worldviews. As articulated in the IDIA Toolkit, CCD operates not only as a cultural lens but as an ethical foundation, foregrounding principles of relationality, reciprocity and accountability to takata whenua (people of the land). Rather than treating culture as an aesthetic element or a secondary concern, CCD positions it as the core from which design inquiry emerges. It prioritises Indigenous voices, aspirations and lived experiences, ensuring that the design process itself becomes a site of inclusion and care.

Together, HQPBL and CCD (Figure 3) enabled a learning experience that was not only academically rigorous but also socially and culturally transformative. *Waka Whetū* exemplifies how these frameworks, when meaningfully integrated, can shape design education that is both future-facing and deeply rooted in place.



Figure 2. Culture-Centred Design infographics designed by Denise Narciso.

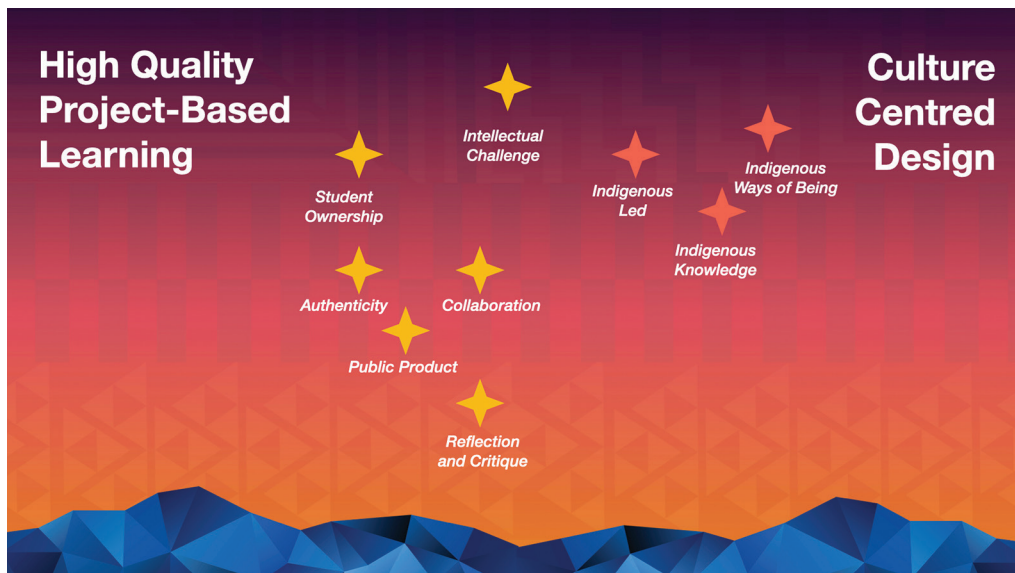


Figure 3. HQPBL and CCD framework. Image by Denise Narciso.

BEYOND THE CLASSROOM: CO-DESIGN IN ACTION

This project extended deliberately beyond the boundaries of the traditional classroom, where learning often revolves around teacher-led instructions. The HQPBL model turns the tables by encouraging students to lead their own learning journey and builds on constructivist action-orientated approach to learning.⁶

Students worked in close consultation with Kāi Tahu astronomer Victoria Campbell; Gerard O'Regan, Curator and Pouhere Kaupapa Māori (Māori advisor) at Tūhura Otago Museum; Head of Exhibitions and Creative Services, Craig Scott; and staff from Te Punaka Ōwheo (Māori Student Support Centre). These partnerships were instrumental in ensuring that the exhibition was both culturally grounded and pedagogically robust. Importantly, the collaboration was framed as designing *with* rather than *for* Māori – an ethos of co-creation that foregrounded relationality, reciprocity and shared knowledge. The outcome was a vibrant and resonant cultural experience that emerged through meaningful dialogue and mutual respect.

RESEARCH AND IDEATION: UNVEILING THE STARS

The project commenced with a rigorous research phase that foregrounded the cultural, ecological and educational significance of the lone star Puaka and the Matariki star cluster. Students explored the symbolic meanings of these stars, their roles in marking seasonal transitions and ties to agricultural cycles, spiritual reflection and social renewal. Within te ao Māori (the Māori world), the stars are not passive celestial objects; they are active participants in the rhythms of life and indicators of time, wellbeing, and environmental change.

Students engaged with diverse sources, privileging oral histories and storytelling shared by Victoria Campbell.⁷ This deepened their understanding of both the historical and contemporary dimensions of mātauraka Māori (Māori knowledge). Students approached the project with openness, humility and active listening, centring the voices and perspectives of Māori in their design approach. This *kōrero* (discussion) provided not only insight into the specific roles and meanings of each star within the Matariki cluster but also revealed the gendered balance and spiritual significance underpinning the Māori lunar calendar. Students learned how Indigenous people use these constellations as a framework for reflection, renewal and the cyclical nature of life – insights that informed and enriched their design responses at every level. This also highlights the importance of collaboration, reflection and critique in HQPBL, where students include diverse perspectives and feedback that improve both the process and the design outcome.

PITCHING IDEAS: COLLABORATING AND REFRAMING EXPECTATIONS

After building a strong foundation through research and cultural learning, students moved into the pitching stage of the project. As part of this process, they visited Tūhura Otago Museum to observe the space where the exhibition would take place. Then, they sketched out early ideas and thought through how their work might fit within the physical environment and the project goal. This helped them understand how their designs could connect with visitors in a real-world setting.

Back in the classroom, students developed their concepts further, working across areas such as branding, animation, interactive installations and educational content. They met with their lecturers to brainstorm ideas before the formal pitch. These discussions encouraged students to push their thinking and consider how to make their work more meaningful and engaging. The pitching session itself was a key moment in the project, giving students a chance to present their ideas to peers, teachers and cultural advisors, and to receive constructive feedback. This process helped them refine the work and build confidence to take their ideas into the next stage of development.

DEVELOPMENT AND REFINEMENT: TURNING IDEAS INTO REALITY

After the pitch presentations, students moved into the development phase, where they began turning their ideas into finished work for the public exhibition. This stage involved refining their concepts, testing different approaches and working closely with others to solve design problems. Collaboration and feedback were key throughout, with students regularly checking in with lecturers, peers, project partners and cultural advisors to make sure their work stayed on track and respected the kaupapa (guiding purpose) of the project.

A significant learning moment emerged during consultation, particularly regarding the arrangement and representation of the Matariki stars in the event logo. Initially, students had proposed a random star configuration with colours they had individually selected. However, through feedback from Victoria, they learned that each star has a specific order and is associated with a designated colour from the national branding – an important detail that was subsequently incorporated into the final designs.⁸

Some illustration designs also required refinement throughout the development process. In the early stages, one of the main poster concepts featured an illustration depicting kai (food) positioned above a head – an arrangement considered tapu (restricted). While this placement initially seemed like an innocent design choice, it became an important learning moment for the students, deepening their understanding of tikaka (customary practices) and the need for culturally respectful visual storytelling.

THE EXHIBITION: A PUBLIC PRODUCT AND CULTURAL DIALOGUE

The final exhibition showcased a diverse range of design outcomes – including visual branding and marketing materials, digital animations, and interactive experiences – crafted to engage and educate the public. Rather than relying on static displays, students aimed to create an immersive and dynamic environment. A standout feature was a large star installation paired with projection animations, pre-recorded audio and sound design, offering a multisensory experience for visitors. Consistent visual storytelling was reinforced through a set of illustrated icons, developed in alignment with the national Matariki brand standards and used throughout the exhibition to unify its visual identity. Students paid careful attention to elements such as colour palettes, imagery and language to ensure cultural accuracy and uphold the exhibition's integrity.

One of the highlights was a moving image piece shown in the Tūhura Otago Museum planetarium, a 360-degree dome theatre. This work invited the audience to travel through the stars on a celestial waka (canoe). Each star in the Matariki cluster was represented through unique, hand-drawn illustrations (Figure 4). Students wrote the script, recorded the karakia (blessing) and edited the animation and sound. The karakia included in Matariki branding was used and Victoria asked permission from Rangī Mātāmua and the Office for Māori Crown Relations – Te Arawhiti to use it in the southern dialect.⁹ This piece brought together storytelling, design and collaboration, and was a strong example of how students applied both creative and cultural learning in a meaningful way.

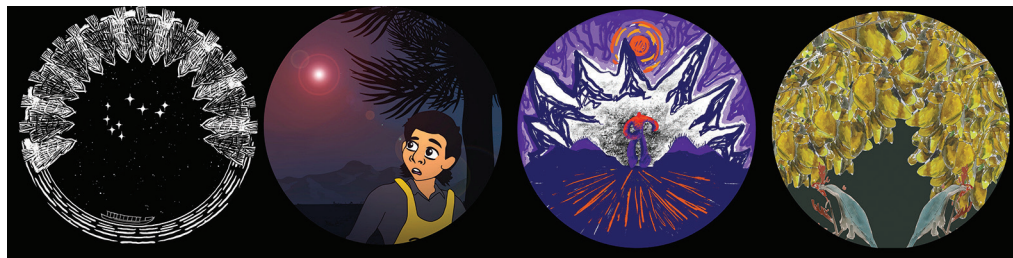


Figure 4. *Waka Whetū*, Planetarium animation screenshots.

The exhibition also featured educational content that linked Matariki's seasonal messages with current environmental themes. One interactive display paired each star with a recipe based on seasonal, locally available ingredients translated from English into te reo Māori (the Māori language). The students took inspiration from the recipe, illustrated the ingredients and used the overarching branding for the layout and composition for a take-home recipe card (Figure 5). This offered visitors a way to connect Matariki to sustainable food practices and, through passing on the recipes, to their whānau.



Figure 5. *Waka Whetū* Exhibition. Photography: Taryn Ormsby.

Another interactive piece, *Starigami*, invited visitors to write a wish on a piece of paper, fold it into a star and place it in a central wishing well, encouraging quiet reflection and a personal connection to the kaupapa. Clear visual instructions guided visitors through the folding process. A highlight for this section was a large, paper mâché star installation, which served as a centrepiece within the exhibition layout.

Throughout the development period, students participated in fortnightly check-ins with project partners and cultural advisors. These meetings helped guide the creative process, ensuring each stage remained accountable, responsive and culturally appropriate. The ongoing dialogue between designers and advisors created a strong foundation for learning and cultural integrity. The iterative nature of the work – developing, testing, receiving feedback and refining – allowed students to grow their skills in real time and approach challenges with professionalism.

The *Waka Whetū* exhibition was the final result of the students' hard work, launched during the Matariki season. This timing was important, as it connected the exhibition to Māori practices of renewal and reflection during this special time of year.

The exhibition was more than just a display of student work – it became a space for learning, discussion, and cultural connection. It offered both Māori and non-Māori communities a chance to engage with Māori knowledge systems and see their relevance in today's world.

REFLECTION AND IMPACT: A MEANINGFUL CONTRIBUTION

Looking back on the project, students felt proud to be part of something much bigger than a regular class project. *Waka Whetū* gave them the chance to contribute to important conversations about environmental care, cultural sustainability and the valuable knowledge of Māori culture. The exhibition showed how design can be a tool for social change and mutual respect.



Figure 6. *Waka Whetū* Exhibition. Photograph: Taryn Ormsby.

Over 5,000 people visited the exhibition during its two-week run, which was a great public response and showed that the project had real impact. Visitors commented on both the quality of the design and the depth of cultural understanding the exhibition offered.

This project highlighted that regular conversations and strong relationships with cultural advisors were key to getting it right. These interactions helped both students and staff understand Māori customs and ways of knowing, being and doing. Respectful engagement required flexibility, openness and humility from everyone involved.

BEHIND THE SCENES: FACILITATORS AND TEAMWORK

Lecturers took on roles beyond just teaching – they acted as facilitators, cultural guides, project managers and sometimes even as contributors to the design team. This flexibility required care, especially when dealing with sensitive cultural topics.

A lot of the success of *Waka Whetū* came from the 'invisible work' behind the scenes and responding and adapting to the needs of the project. Examples of this included coordinating with different stakeholders, securing sponsorships, experimenting with new technology and managing the dynamics between students, staff and cultural advisors. Both students and lecturers put in a lot of effort to make the project a success.



Figure 7. Starigami Station at the Waka Whetū Exhibition. Photograph: Taryn Ormsby.

LOOKING AHEAD: A MODEL FOR THE FUTURE

Waka Whetū offers a model that can be used in design education, both in Aotearoa and elsewhere. By integrating Indigenous leadership, community involvement and project-based learning into the curriculum, educators can help students become not only skilled designers but also culturally aware and socially responsible individuals. The use of HQPBL alongside Culture-Centred Design complemented the Communication Design programme and encouraged educational experiences that respect Indigenous knowledge. This approach helped students develop the empathy and understanding needed to work in diverse cultural settings. Just as our ancestors once looked to the stars for direction, as educators we can embrace the teachings embedded within these frameworks and navigate towards a more inclusive, collaborative and culturally connected future.

CONCLUSIONS AND REFLECTIONS

At this point we're still reflecting and learning from the experience, but we have identified some initial thoughts for future initiatives that seek to integrate cultural knowledge in design education.

The project-based learning model becomes more rigorous and impactful when specific criteria are carefully considered during course design. We found that culture-centred projects gain deeper meaning and relevance when clients and Indigenous partners are fully engaged throughout the entire design process, fostering stronger connections between the students, the work and its real-world context.

Conversations, relationship-building and interactions with cultural advisors at every stage of the design process were crucial in ensuring project outcomes remained respectful and aligned with the subtleties of Indigenous knowledge and ways of being. This project emphasised that bicultural projects require ongoing reflection, adaptation and openness from all stakeholders – students, staff and clients.



Figure 8. Waka Whetū Exhibition, Planetarium entrance. Photograph: Taryn Ormsby.

Cultural safety and creating inclusive environments for students and staff is paramount for success. Bicultural projects in Aotearoa should be inclusive for people of all cultural backgrounds, whether you're a student, educator, designer or member of the public, involved in the design process or interacting with the exhibition. Everyone should feel safe to engage and have their voices heard to encourage shared connection, understanding, respect and reciprocity. Safely facilitating conversations with students that enhanced the mana of the project improved their experiences of learning, as well as their social and academic outcomes.

The combination of High-Quality Project-Based Learning alongside Culture-Centred Design principles provides a robust framework to follow for future projects to enhance student learning, foster cultural engagement and prepare graduates for community-oriented, inclusive design practice. The Communication Design programme at Otago Polytechnic aims to share and refine this model for future projects and are eager to gather feedback from other teaching staff, students and stakeholders to enhance its effectiveness and applicability.

Denise Narciso (ORCID ID: 0000-0001-9516-5921) is a Principal Lecturer in Visual Communication Design within the School of Design at Te Maru Pūmanawa (College of Creative Practice and Enterprise), Otago Polytechnic. Her research interests include developing a Project-Based Learning framework for the degree, enhancing ākonga (student) experiences and strengthening partnerships both within Otago Polytechnic and with external community partners. With over 15 years of experience in the design industry – including freelance work for local companies – she brings a wealth of practical knowledge to her teaching. She is currently pursuing a Master's degree, focusing on the importance of culture and identity in the design process. She holds a Postgraduate Diploma in Design from Otago Polytechnic, a Bachelor's Degree in Advertising Management, a Diploma in Tertiary Education and a Certificate in Te Mata a Ao Māori.

Taryn Ormsby is a Māori artist, designer and Kaiako (lecturer) of Ngāti Maniapoto and Pakeha descent within the School of Design at Otago Polytechnic. Having worked in the design industry for more than 15 years in Australia, London and now Aotearoa (New Zealand), she blends a deep understanding of communication design in practice with a genuine curiosity for effective methods of teaching. With her industry links, Taryn is passionate about connecting talented students with real-world projects and internship experiences to enhance their learning and career development. Taryn holds a Bachelor of Design from UniSC, and a Certificate in Māori and Indigenous Art.

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