

Article

Food spaces that foster student capabilities: insights from a rural Aotearoa New Zealand high school

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Abstract

This study explores how a school wharekai (communal dining hall) implementing the Ka Ora, Ka Ako Healthy School Lunch Programme operates as a multidimensional health promotion setting that fosters student capabilities beyond nutrition. Using a qualitative approach grounded in mātauranga Māori (Māori knowledge) and community-based participatory research, we conducted focus groups with 22 students and semi-structured interviews with 12 staff members to examine how the wharekai promotes wellbeing. Findings show that the wharekai provides a culturally responsive environment where three interrelated capabilities flourish: self-management, interpersonal relationships, and community participation. Through daily routines and authentic roles in food preparation, students practise responsibility, initiative, and cooperation. Shared meals strengthen tuakana-teina (peer) relationships and build trust between students and staff, while collective activities foster belonging, reciprocity, and sustainability. Conceptualizing food spaces through cultural frameworks such as the wharekai demonstrates how school food programmes can simultaneously address food insecurity and create transformative learning environments. This study highlights how culturally grounded, settings-based approaches can integrate nutritional, social, and relational dimensions of health promotion, reimagining school food provision as a holistic, capability-building practice that enhances individual and collective wellbeing.

Keywords: capability development; culturally responsive pedagogy; school food programmes; student wellbeing; relationships; settings-based health promotion

Contribution to Health Promotion

- Advances health promotion by reconceptualizing school food spaces as culturally grounded, capability-building environments that address multiple determinants of health
- Demonstrates how Indigenous knowledge systems and Māori approaches can inform settings-based health promotion that moves beyond nutritional interventions to develop student agency, social connection, and community participation
- Provides empirical evidence that culturally grounded food environments support both immediate health needs and long-term capability development essential for wellbeing
- Shows how everyday food routines can nurture self-management, relationships, and meaningful participation, offering a transferable framework for integrating nutritional, social, cultural, and educational outcomes in health promotion practice

BACKGROUND

In Aotearoa New Zealand, food insecurity among school-aged children has become a pressing health and education issue. The most recent Programme for International Student Assessment (PISA) results indicate a decline in student achievement in reading, maths, and science, with food insecurity identified as a significant contributing factor (OECD 2023, McKelvie *et al.* 2024). Aotearoa New Zealand now ranks among the highest in the

OECD for students missing meals due to a lack of resources, and achievement gaps between food-secure and food-insecure students remain wide (Garton *et al.* 2023). These inequities are not only nutritional but also social and educational, affecting attendance, concentration, wellbeing, and participation in school life.

Ka Ora Ka Ako—Aotearoa New Zealand's government-funded school lunch programme—was introduced in 2020 to address these inequities and now serves approximately

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220 000 students across over 1000 schools (Ministry of Education 2025). The programme targets schools in the lowest 25% of the Equity Index, with all students in participating schools receiving lunches through either external providers, internal school-based preparation, partnerships with Māori providers, or collaboration with local community networks. These schools have a daily provision of meals meeting strict nutritional guidelines (Garton *et al.* 2023). While primarily framed as a nutritional intervention, the programme has also created opportunities for reimagining school food spaces as settings for relationship-building, cultural connection, and community engagement.

In te ao Māori (the Māori world), the wharekai—a community dining hall typically located on a marae (a traditional Māori communal site)—is a culturally and spiritually significant space where manaakitanga (the Māori ethic of nurturing others through respect, generosity, care, and reciprocity), whanaungatanga (the Māori process of forming and maintaining relationships, grounded in connection, kinship, and a sense of belonging), and tikanga (Māori values and principles that guide appropriate practice) are enacted through the preparation, sharing, and clearing away of kai (food). The wharekai is not simply a venue for eating but a space that carries mauri (life force) and mana (authority, prestige) through the relationships, whakapapa (genealogy, connections), and collective responsibilities it sustains. Bringing a wharekai approach into a school setting can therefore create a culturally responsive environment where these values are embedded in everyday routines.

Across education systems, there is an increasing emphasis on developing student capabilities that extend beyond conventional academic achievement outcomes to encompass social, emotional, and interpersonal dimensions of learning. Often aligned with broader goals of wellbeing, adaptability, and citizenship, these capabilities concern what students know and can do and how they engage meaningfully in complex, relational, and dynamic contexts. This shift reflects a move away from narrow notions of ‘competency’ and towards more holistic and situated conceptions of educational purpose (Nussbaum 2011).

In Aotearoa New Zealand, the inclusion of five key competencies in the New Zealand Curriculum—thinking; using language, symbols, and texts; managing self; relating to others; and participating and contributing—has, since 2007, reflected an intent to move beyond content mastery towards the development of broader life skills (Ministry of Education 2007, 2023). These competencies are intended to be integrated across curriculum areas and developed through students’ interactions with people, places, and ideas (TKI 2020). However, implementation has often been fragmented and classroom-centric, not fully realizing the relational, contextual, and culturally grounded aspirations underpinning the competencies (Hipkins 2016, 2022; Brudevold-Iversen *et al.* 2013).

This implementation challenge parallels similar concerns in health promotion, where scholars such as Frahsa *et al.* (2021) have critiqued static interventions in favour of more dynamic, relational approaches. Their work extends health promotion’s settings-based approach by introducing the capability approach to understand how various actors influence and are influenced by personal, social, and environmental factors. This conceptual shift in health promotion aligns with educational scholarship calling for a reconceptualization of competencies through a capabilities lens, which centres learner agency,

cultural identity, and the interplay between individual development and collective wellbeing (Charteris 2023). Both fields point to the need to move beyond static lists of attributes towards more dynamic, dialogic, and place-based understandings of capability development that acknowledge the complex interplay of contexts, relationships, and cultural factors.

However, there remains a gap in understanding how these perspectives—capability development and settings-based health promotion—can be meaningfully integrated within culturally grounded, non-classroom spaces in schools. While much of the existing literature focuses on classroom-based strategies, less attention has been paid to how capabilities might be fostered through holistic, relationship-centred learning environments, including school-based food programmes or other social spaces within schools (Collins *et al.* 2015). These relational, embodied, and everyday spaces offer important opportunities for students to develop capabilities through participation, care, and collective responsibility.

At the same time, rising levels of food insecurity among school-aged children have sharpened the need for interventions that address students’ basic needs while also supporting broader developmental outcomes. This resonates with Frahsa *et al.*’s (2021) call to view health promotion settings not as fixed, bounded environments but as dynamic, co-produced spaces shaped by the interactions and agency of all actors involved. These findings underscore the need to reframe school food provision beyond nutritional support. While research has focused on nutritional and attendance outcomes, there remains scope to explore how these spaces might foster capabilities like self-management, community participation, and interpersonal relationships, which are essential for holistic student development and long-term wellbeing.

This article presents a qualitative study of a rural secondary school in Aotearoa New Zealand that has integrated the Ka Ora Ka Ako school lunch programme within a broader pedagogical and community-based initiative centred on its wharekai. The school’s wharekai functions not only as a food service facility but as a shared learning space where students, staff, and community members engage in collective meal preparation, social interaction, and vocational education. Grounded in mātauranga Māori (Māori knowledge), the study explores how the wharekai fosters self-management, interpersonal relationships, and values such as whanaungatanga and manaakitanga, conceptualizing these as interdependent capabilities that support wellbeing and community contribution.

This research aimed to examine how a culturally grounded wharekai model functions as a multidimensional health promotion setting that builds students’ capabilities and to consider the transferability of its core elements to other contexts. In doing so, this paper aligns with international evidence that emphasizes the role of culturally responsive school food programmes in advancing equity, social connection, and educational engagement (Ray *et al.* 2019, Cohen *et al.* 2021). It contributes to calls for education systems to prioritize wellbeing, cultural grounding, and social equity within curriculum enactment (Langford *et al.* 2014), while offering insights for health promotion practitioners seeking to integrate nutritional, cultural, and relational dimensions in school-based initiatives. These findings are particularly timely given Ka Ora Ka Ako’s 2025 restructuring, which significantly reduced funding and shifted from local providers to a national contractor (Ministry of Education 2025). The changes have sparked

debate about whether cost-cutting is being prioritized over programme quality and community benefits. Our study illustrates what may be lost, showing how school food programmes can operate as a transformative space for capability development, relationships, and community engagement beyond nutritional provision alone.

METHODS

Research setting and partnership

Through an established relationship built on mutual trust and prior collaboration, the researchers met with Dannevirke High School leaders to explore partnering with them to understand their innovative approach to delivering the Ka Ora, Ka Ako programme. This preexisting connection reflected principles of whanaungatanga and provided a culturally appropriate foundation for engagement. Dannevirke High School is located in the Tararua District of Aotearoa, New Zealand, a predominantly rural area characterized by agricultural and service-based employment and relatively high levels of socioeconomic deprivation compared with national averages (Statistics New Zealand 2023). The school has a roll of approximately 400–500 students, with around 40% identifying as Māori. The school expressed pride in their programme and a desire for their contribution to be recognized publicly, while all participants' identities remained confidential.

Theoretical and methodological framework

The research was based on principles of mātauranga Māori and community-based participatory research (CBPR), bringing university academics alongside staff and students from Dannevirke High School. Mātauranga Māori is nuanced and localized to specific communities (Le Grice *et al.* 2017), recognizing that each community has developed its own body of knowledge derived from its experiences, relationships, and environments. Core principles, such as manaakitanga, kaitiakitanga (Māori principle of guardianship and stewardship), kotahitanga (collective unity and solidarity), and whanaungatanga, were enacted through the research process, including participant engagement, data collection, and interpretation. These principles naturally align with CBPR, which involves stakeholders at all stages of the research process, from data collection to data analysis and dissemination (Tremblay *et al.* 2018). In this context, CBPR meant co-designing the research questions with school leaders, ensuring reciprocal benefits, and valuing the strengths each partner brought to the knowledge creation process (Wallerstein *et al.* 2018).

Researcher positionality

The research team's positionality was central to how the study was conducted and how data were interpreted. The authorship team includes kaupapa Māori (Māori-centred) researchers who identify as Māori and teach and research in hauora Māori (Māori wellbeing), alongside a Pākehā (non-Māori New Zealander) researcher who teaches and researches in public health and has personal connections to the Dannevirke community. Key staff from the Dannevirke community were active members of the co-design process throughout. These diverse positionalities—grounded in both lived experience and academic practice—shaped the collaborative and culturally responsive approach across all stages of the project and informed how values such as whanaungatanga, manaakitanga,

and kotahitanga guided interpretation and meaning-making. This ensured that the study remained relational, contextually grounded, and accountable to the school community.

Participants and data collection

Ethical approval was granted by the Massey University Human Ethics Committee (OM1 23/13). Naming the school was an important part of the process, reflecting the school's pride in its programme and desire for its contribution to be recognized, while all participants' identities remained confidential.

Data collection took place on 8–9 June 2023 and involved teachers, wharekai staff, and students. Twenty-two students (Years 9–13, aged 13–18 years; balanced gender representation; mix of Māori and non-Māori) participated in four focus groups, and 12 adults (teachers, wharekai staff, school leaders) took part in semi-structured interviews.

Interviews and focus groups began with mihi (greetings and introductions), karakia (opening blessing), and whakawhānaungatanga (relationship-building) to establish connection and shared purpose, concluding with shared kai as an act of manaakitanga. Participants guided the flow of conversation, and sessions were conducted kanohi ki te kanohi (face-to-face), reflecting Māori ways of learning and privileging collective reflection, dialogue, and storytelling.

A videographer also recorded footage of the wharekai in action for a short dissemination film (Severinsen *et al.* 2024). Quotations are attributed by participant role and number (e.g. 'Student 1', 'Teacher 2') to preserve confidentiality while recognizing contributors' mana and diverse perspectives.

Data analysis

We employed reflexive thematic analysis with an inductive, latent orientation (Braun and Clarke 2021, 2022). The six iterative phases included familiarization, coding, theme development, review, naming, and writing. Researchers first immersed themselves in the data by reading and re-reading transcripts and reviewing video footage to capture both verbal and non-verbal interactions.

The analysis was inductive, meaning that themes were generated from the data rather than imposed from preexisting theory, and latent, focusing on the underlying values, meanings, and cultural concepts within participants' kōrero (narratives) (e.g. manaakitanga, whanaungatanga, collective responsibility). This approach aligns with Māori and CBPR principles, privileging participants' lived realities and collective meaning-making over researcher-imposed interpretations.

A kaupapa Māori approach actively shaped the analytic process. Whanaungatanga guided how codes were grouped to reflect collective relationships rather than isolated individual experiences; manaakitanga informed interpretation of care, reciprocity, and wellbeing; kaitiakitanga underpinned the team's responsibility to handle participants' voices with integrity; and kotahitanga shaped how themes were refined to represent shared understandings.

Analysis was conducted collaboratively through a series of hui (meetings) where researchers and school representatives discussed preliminary interpretations, ensuring that meaning was co-constructed and that findings remained contextually and culturally grounded.

This reflexive process acknowledged the positionality of the research team, who drew on both Māori and non-Māori perspectives. Reflexive memos—brief, iterative notes capturing

analytic reflections—documented how cultural values informed decisions and helped distinguish this mātauranga Māori-guided approach from standard collaborative qualitative methods. These memos served as reflective tools to record how values shaped interpretation and to ensure cultural and relational accountability throughout the analysis.

RESULTS

Analysis identified three interconnected areas of capability development within the wharekai: self-management, interpersonal relationships, and community participation. All were underpinned by te ao Māori values of whanaungatanga, manaakitanga, kaitiakitanga, and kotahitanga. Students and staff consistently described the wharekai as a culturally grounded, relational space that supported learning, belonging, and contribution.

Theme 1: self-management—practising responsibility, initiative, and emotional regulation through wharekai routines

In te ao Māori, the ability to manage oneself is not viewed as an isolated skill, but as a wider web of relationships and collective responsibilities. Within the wharekai, self-management was nurtured through everyday routines grounded in tikanga, opportunities to take initiative, and the provision of physical and emotional safety that supported learning and wellbeing.

Daily practices provided the foundation for responsibility. Students described how these routines mirrored marae protocols: ‘Well, like we kind of just follow the protocols that we would in the marae... It teaches all of our students respect and the proper protocols that we would use anywhere’ (Student 1).

Teachers likewise saw the wharekai as a practical space where school values of respect, responsibility, and resilience were ‘lived out’ through simple acts such as scraping plates, sorting waste, and tidying the space: ‘They go in and they know they need to sit down, eat their food, and then clean up after themselves. They know to scrape it off in the scrap bin and put rubbish in the rubbish bin, then take their plates away’ (Teacher 1).

Because these practices were repeated every day, they soon became ingrained habits. One teacher noted, ‘Every time they go to the wharekai, the last thing they do is put stuff in the rubbish... It’s becoming habitual’ (Teacher 2), while a student added, ‘We’ve got more pride in our space now’ (Student 2). This sense of shared responsibility embedded through routine created the conditions for students to step into more active roles.

From this base, the wharekai offered authentic tasks that fostered motivation and initiative. Students spoke with pride about creating menus and preparing meals for the whole school: ‘It was really mind-blowing... It’s helped us to improve how we can create things in the kitchen’ (Student 3). Teachers highlighted structured vocational placements with the school chef—a trained restaurant professional—as important opportunities to practise responsibility at industry standard: ‘They had one day a week on placement... and they had to work up to restaurant standards. It’s been absolutely fantastic for them’ (Wharekai Staff 1).

Students also showed initiative through voluntary contributions outside school hours. A teacher recalled with pride: ‘They made sandwiches one morning for the wharekai

morning tea. Three of them came to school from six o’clock... In 15 minutes, all the sandwiches were eaten’ (Teacher 3).

These experiences shifted students from passive recipients of food to active participants in its preparation and service. Teachers noted how such involvement had long-term effects: ‘[It] gave those two girls a career... the skills and competence to have a meaningful career path’ (Wharekai staff 1). Students themselves described the confidence this gave them: ‘It makes you feel like you can actually do something right... and that people trust you to do it’ (Student 4).

Alongside responsibility and initiative, the wharekai also supported emotional regulation by meeting basic needs. Students emphasized how eating regularly improved their ability to focus: ‘It sort of feels like you are ready to learn... You’re not worrying about anything else... You’re just ready to learn’ (Student 5). Teachers observed the difference in classroom behaviour: ‘Period 5... was diabolical [before the wharekai]... Lots of kids were hungry... You can’t learn if you’re hungry’ (Teacher 4).

Finally, belonging and emotional safety were essential foundations for self-management. The wharekai was widely described as a safe, welcoming environment where students felt included and respected. One teacher explained, ‘It’s become more of a safe place for a lot of kids to go... They feel safer there’ (Teacher 2), while a student echoed, ‘It’s like a second home... You just know how things work, and you feel part of it’ (Student 6).

Together, these accounts show that self-management in the wharekai was not only about individual discipline but also about practising responsibility, initiative, and emotional regulation within a supportive, culturally grounded collective environment.

Theme 2: interpersonal relationships—building respect, trust, and reciprocity through shared kai

The wharekai operated as a relational hub where whanaungatanga was enacted daily. Through shared meals, informal conversations, and acts of manaakitanga, students and staff strengthened bonds across year levels and between peers and teachers. Students explained how the atmosphere echoed the communal feel of the marae: ‘For me it sort of reminds me of like being at home or being at my marae... There’s chatting going on... Adults, kids, they’re all talking to each other... all having a good time’ (Student 5).

This collective spirit helped break down barriers that typically separated year groups. Eating together created natural opportunities for tuakana–teina relationships, with older students supporting and guiding their younger peers: ‘Well, socially, I’ve sat down to people that I might not know and become friends with them ‘cos of the wharekai... It’s like a mingling of all the years... Younger people can meet with older people and... really talk and engage’ (Student 7).

Teachers noted how the school built on these informal connections through deliberate activities: ‘You might see Year 9 kids sitting with older boys... a bit of tuakana–teina there with them bonding’ (Teacher 5).

The benefits of these interactions extended beyond peer relationships to include staff–student connections. Teachers valued the opportunity to engage with students kanohi ki te kanohi (face-to-face) outside of the formal classroom context: ‘Teaching is 60% relationships, 40% content... For that content to be effective, we need to have positive relationships...

The wharekai gives us a way of building those relationship' (Teacher 6).

These interactions were more personal and relaxed, often about 'life in general' (Teacher 1) rather than school-work. For students, this accessibility to staff mattered: 'You just go sit with other people, and you just start talking to them... I've gotten to know quite a few people in here' (Student 7).

As trust deepened, the wharekai became a space of emotional safety and care. Teachers described the significance of these small moments, 'Seeing them talk and interact over kai is fantastic' (Teacher 7), and recognized the wharekai as a place of support, 'one of those places where [rangatahi, young people] can go for a bit of a pick-me-up' (Teacher 6).

These experiences demonstrate how food and fellowship together create the emotional grounding for learning and wellbeing.

Finally, the practice of manaakitanga was not confined to peer or staff interactions but extended to visitors and the wider community. Students expressed pride in hosting others and ensuring the wharekai upheld its values: '[The wharekai] gives us a venue for when we're hosting a sports team... The boys clean up afterwards and they're very proud of it' (Teacher 2). Such acts of hospitality reinforced students' sense of responsibility for others and demonstrated that relational capability involved not only making connections but sustaining them through care and reciprocity.

Taken together, these accounts show that the wharekai did far more than facilitate mealtimes. It created an egalitarian space where relationships were actively cultivated—across ages, between staff and students, and with the wider community—grounding interpersonal capability in the values of whanaungatanga and manaakitanga.

Theme 3: community participation—contributing to the collective within and beyond the school

The wharekai became a focal point for students' contributions to the collective life of the school, embedding responsibility, reciprocity, and environmental stewardship. Participation was visible in the everyday running of the space and extended outward to curriculum learning, wider community service, and initiatives promoting equity and inclusion.

Students and staff described how daily routines such as recycling, waste reduction, and maintaining the wharekai nurtured values of sustainability and care. One staff member explained, 'They've got less wastage in terms of kai' (Teacher 6), while a teacher added, 'Kids are taught to put their rubbish in one container and their recycling in another... teaching them values about sustainability' (Teacher 3). These small but consistent actions reinforced kaitiakitanga and connected tikanga to contemporary environmental practice.

Community participation was further reinforced through learning programmes that linked classroom activities to the wharekai. Students in food and nutrition classes devised menus and then cooked meals for the school. As one staff member described, 'They supplied those vegetables to the wharekai... and then they have to cook it' (Teacher 3). By seeing their contributions immediately used and appreciated by peers, students developed confidence, agency, and pride in their work. These activities demonstrated how the wharekai functioned as an authentic site of learning where contribution was inseparable from capability development.

The value of manaakitanga was particularly evident in times of crisis. During COVID-19, the wharekai became a centre for preparing meals for the wider community. After Cyclone Gabrielle, a major weather event in 2023 that caused widespread flooding, power outages, and infrastructure damage, students and staff hosted a fundraising dinner to support those affected. Students described the significance of these experiences: 'It felt good to be part of helping people, not just in our school, but outside of it too' (Student 2). These acts positioned the wharekai as not only a school facility but also a community resource, reinforcing students' understanding that participation includes contributing to collective wellbeing beyond their immediate environment.

Teachers also highlighted the importance of the wharekai in levelling the playing field for students facing food insecurity: 'It evens the playing field of where our students start. So we've got students ... that may not have been able to come to school with kai or with uniform... all those sorts of little things that add towards students being able to learn' (Teacher 7). Students also recognized this impact on whānau (extended family) resources: 'That money... can be used for other stuff... especially for kids that aren't so fortunate... We're like a low-decile school' (Student 8).

Because every student ate together, access to kai was normalized, preventing stigma and ensuring participation with dignity. One student likened the atmosphere to the marae: 'It reminds me of when you're at a marae, and you've got all the manuhiri [visitors] coming into the wharekai to eat' (Student 1).

The shared experience of kai also shaped the wider rhythms of school life. Teachers observed that students' familiarity with large group settings made collective events easier: 'It makes assemblies a little bit easier... athletics days and swimming days easier... The kids are so used to socializing in large groups' (Teacher 4). Attendance patterns also improved: 'Since we've had the wharekai... we're getting greater attendance in the mornings' (Teacher 2). These outcomes suggest that the wharekai not only supported participation within its walls but also had ripple effects across the school community.

Through everyday responsibilities, curriculum-linked contributions, acts of service, and the removal of barriers to participation, the wharekai nurtured students as active members of a collective. Their involvement reflected and reinforced the Māori values of whanaungatanga, manaakitanga, kaitiakitanga, and kotahitanga.

Taken together, these findings show how the wharekai functioned as more than a dining hall—it was a culturally grounded setting where capabilities were developed through everyday practice. Students learned self-management by taking responsibility within tikanga-based routines, exercising initiative through authentic tasks, and regulating their learning once hunger was removed. They strengthened interpersonal relationships through the daily enactment of whanaungatanga and manaakitanga, building trust across year levels and with staff in an environment that fostered emotional safety and belonging. Finally, they engaged in community participation by contributing to the collective life of the school, practising sustainability, extending hospitality to visitors, and supporting the wider community in times of need. These interconnected capabilities illustrate how the wharekai nurtured both individual growth and learning and collective wellbeing.

DISCUSSION

This study demonstrates how embedding the Ka Ora, Ka Ako Healthy School Lunch Programme within a wharekai setting created a culturally grounded health-promoting environment. Rather than operating as a purely nutritional intervention, the wharekai became a site for enacting te ao Māori values—manaakitanga, whanaungatanga, kaitiakitanga, and kotahitanga—that extended beyond the provision of food. By situating the programme in a communal and relational space, the school was able to foster self-management, strengthen interpersonal relationships, and promote collective participation, echoing the principles of both Māori health promotion and international settings-based health promotion approaches.

The findings highlight the importance of shifting away from narrow, individualized understandings of health promotion towards holistic and ecological approaches that address multiple layers of wellbeing simultaneously. This aligns with the shift described by Mohammadi *et al.* (2024) from reductionist, individual-focused health promotion to holistic, ecological, and whole-system approaches. In this sense, the wharekai functioned as both a physical and symbolic setting that nurtured health as a collective good, with practices that were relational, intergenerational, and embedded in everyday school life.

In line with Kickbusch's (1995) and Baum's (2016) hallmarks of successful settings approaches, the wharekai demonstrates how culturally responsive spaces can simultaneously address immediate nutritional needs and build long-term capabilities that support wellbeing and community participation. The school's approach illustrates the adaptability of settings-based models when grounded in Indigenous worldviews, offering insights into how culturally situated practices can inform broader strategies for promoting health equity and resilience. This also provides a tangible example of how the New Zealand Curriculum's vision of developing five key competencies (Ministry of Education 2007, 2023) can be realized in practice. Rather than competencies being confined to fragmented or classroom-based delivery, as often critiqued (Hipkins 2016, 2022), the wharekai integrated them seamlessly into daily life, creating lived opportunities for students to enact and strengthen these skills.

Reframing school food provision as health promotion

Internationally, school food programmes are often assessed in terms of nutritional outcomes, equity of access, or economic cost-effectiveness (Badyal and Moffat 2025). While these factors are important, our findings suggest that the Ka Ora, Ka Ako initiative achieved broader outcomes by embedding food provision within pedagogical and cultural practices. The wharekai did not simply function as a distribution site for food; it became a site of relational learning and capability building. This echoes arguments by Lang and Rayner (2012) that food policy should be understood as multidimensional, encompassing social, cultural, and ecological dimensions in addition to health.

Within this context, our study supports the view that school food programmes should be reframed as health promotion strategies rather than welfare interventions. By drawing on te ao Māori values, the wharekai model demonstrates how food provision can become a vehicle for holistic wellbeing, which emphasizes the interconnectedness of cultural identity, participation, and autonomy in health promotion.

Self-management and lifelong capabilities

One of the key findings was the way the wharekai environment cultivated students' self-management skills, including responsibility, time management, and self-discipline. These outcomes extend beyond nutritional knowledge or dietary habits, aligning with literature on life-skills education in schools (World Health Organization 2020). Nutbeam (2000) argues that health promotion should support the development of 'health literacy' and critical skills that empower individuals to make informed choices. This echoes the intent of the New Zealand Curriculum's five key competencies, particularly 'Managing self', but also 'Thinking' and 'Participating and contributing', which were designed to be enacted through authentic, contextualized experiences (Ministry of Education 2007, 2023, TKI 2020). In contrast to the often fragmented, classroom-centric implementation noted by Hipkins (2016) and Hipkins *et al.* (2022), the wharekai provided a living context in which these competencies were embedded in daily routines and reinforced through culturally grounded practice. This extends the work of Boyd (2011), who found that school food environments can foster agency and resilience when students are given roles in planning and delivery. Importantly, in our context, these opportunities were mediated through Māori values, situating self-management within collective responsibility rather than individualistic notions of achievement. This challenges neoliberal framings of health behaviours as personal choices, instead emphasizing relational accountability.

Interpersonal relationships and Whanaungatanga

The second theme—interpersonal relationships—highlights how the wharekai facilitated relational connections among students, teachers, and the wider community. Whanaungatanga, as both a value and practice, was central to this process. Existing literature demonstrates that school belonging and positive relationships are critical determinants of student wellbeing and engagement (Allen *et al.* 2018, Korpershoek *et al.* 2019). Our findings reinforce this by showing that food-sharing practices created opportunities for connection and reciprocity, aligning with Māori understandings of wellbeing as relational rather than purely individual (Moeka-Pickering *et al.* 2015, Wilson *et al.* 2021). This directly reflects the competency 'Relating to others', while also supporting 'Using language, symbols and texts', as students engaged in communication, empathy, and cultural protocols within a shared environment.

The relational dimension of food is often overlooked in health promotion, which tends to focus narrowly on individual behaviour change (Lang and Rayner 2012). However, research in Indigenous and minority communities emphasizes the importance of culturally grounded relational practices in fostering wellbeing (Walters *et al.* 2020, Wilson *et al.* 2021). By embedding whanaungatanga in the everyday routines of the school, the wharekai contributed to a sense of belonging and collective identity, supporting both educational and health outcomes.

Community participation and Manaakitanga

The third theme concerned community participation, where the wharekai served as a bridge between school and community. This resonates with evidence that community engagement in school health initiatives increases sustainability and effectiveness (Langford *et al.* 2014). The practice of manaakitanga—extending care and hospitality—ensured that food

provision was not framed as charity, but as an expression of collective wellbeing.

From a *te ao Māori* perspective, *manaakitanga* affirms the dignity of individuals and communities (Mutu 2020, Kaa and Willis 2021). This contrasts with deficit-oriented approaches that often stigmatize recipients of food aid (Caraher and Furey 2018). Instead, the *wharekai* model demonstrates how school food provision can strengthen social cohesion and uphold the *mana* of all involved. This maps closely onto the competency ‘Participating and contributing’, as students engaged in collective activities, both within and beyond the school, developing dispositions for active citizenship and reciprocity. This aligns with Indigenous approaches to food sovereignty, which prioritize collective responsibility, reciprocity, and guardianship of resources (Moeke-Pickering *et al.* 2015, Ray *et al.* 2019).

Implications for practice

This study offers important insights for both policy and curriculum implementation. At a policy level, the integration of *Ka Ora*, *Ka Ako* within a *wharekai* model demonstrates how national food programmes can be enacted in ways that not only address nutritional needs but also embed Māori values such as *manaakitanga*, *whanaungatanga*, *tikanga*, and *kaitiakitanga*. Current school food policies tend to focus narrowly on logistics and health outcomes, without adequately recognizing the cultural, relational, and community dimensions of food provision (McKerchar *et al.* 2024). Our findings highlight the need for policy frameworks to mandate space for local adaptation, ensuring that schools can draw on community knowledge, cultural practices, and *whānau* engagement in ways that strengthen *hauora* (health and wellbeing) and social cohesion.

At a curriculum level, this study illustrates how food programmes can be aligned with the New Zealand Curriculum’s focus on the holistic development of students. The *wharekai* model provides opportunities to integrate learning across health, social studies, and *tikanga*-based education, reinforcing capabilities such as self-management, collective contribution, and relational agency. Importantly, this demonstrates that food provision is not just an operational matter but also a pedagogical opportunity to nurture identity, belonging, and wellbeing (Moeke-Pickering *et al.* 2015, Hardy *et al.* 2024, McKerchar *et al.* 2024).

Taken together, these findings suggest that greater alignment between policy and curriculum is needed. A systems-level approach is required to embed culturally grounded practice across both domains, enabling *Ka Ora*, *Ka Ako* to move beyond a service delivery model towards a transformative practice that supports equity, wellbeing, and food sovereignty in Aotearoa New Zealand (Kickbusch and Gleicher 2012).

There is also clear international relevance. School food programmes worldwide are often designed primarily as welfare or nutrition interventions, with little attention to cultural identity, relational practice, or community sovereignty (Hardy *et al.* 2024, Badyal and Moffat 2025). The Aotearoa New Zealand study highlights how embedding Indigenous values into policy and pedagogy can enhance both nutritional outcomes and cultural wellbeing. This provides a valuable reference point for global policymakers seeking to design food-in-schools initiatives that are not only health-promoting but also culturally sustaining and socially just.

While the *wharekai* is specific to *te ao Māori*, several core mechanisms are transferable across contexts when adapted

through local cultural frameworks: (i) relational hospitality (e.g. practices aligned with *manaakitanga*—hosting and care); (ii) shared, authentic roles in food provisioning (collective preparation, service, and cleanup embedded in everyday routines); and (iii) place-based stewardship (*kaitiakitanga*-aligned sustainability practices). Transferability requires co-design with communities, attention to local values and protocols, and governance that protects cultural intent. We therefore recommend adaptation that centres local Indigenous or community epistemologies rather than replicating surface features of the model.

Limitations and future research

While this study focused on a single school community, its strength lies in the depth of insight provided through a *kaupapa Māori*, community-based participatory approach. The findings are grounded in the lived experiences of participants within a specific context, offering transferable learnings rather than generalizable outcomes. By privileging qualitative, relational, and culturally grounded methods, the study captures dimensions of wellbeing, capability development, and community connection that can sometimes be overlooked in quantitative approaches.

Future research could extend this work by incorporating mixed methods to explore both measurable and intangible outcomes of school-based *wharekai* models. It would also be valuable to examine how structural factors—such as funding sustainability and broader food system inequities—shape the potential for such initiatives to inform systemic change in food policy and support food sovereignty in Aotearoa New Zealand.

CONCLUSION

By situating *Ka Ora*, *Ka Ako* within the cultural framework of a *wharekai*, this school has created more than a lunch programme—it has established a relational, capability-building, and community-strengthening space grounded in *te ao Māori* values. The *wharekai* model demonstrates how everyday practices of sharing *kai* can be leveraged as powerful vehicles for both learning and wellbeing, offering a compelling example of how schools can create environments that nurture essential life skills through authentic, meaningful experiences. In doing so, this approach directly addresses issues of wellbeing and equity while embedding cultural responsiveness at the centre of daily school life.

This study contributes to the growing body of research on innovative and holistic approaches to promoting educational equity and student development. It highlights the potential for culturally grounded, community-led models to align with broader educational and public health goals, bridging policy aspirations with practice. As education systems globally continue to evolve and adapt to the changing needs of learners, the experiences shared by this school community provide valuable insights into the potential of initiatives like the *wharekai* to support holistic student development, regardless of specific policy contexts or curriculum frameworks.

Importantly, such approaches also extend beyond education, offering lessons for Indigenous and community-led health promotion internationally. By foregrounding relationality, wellbeing, and capability-building, the *wharekai* example underscores how culturally embedded practices can advance health and education outcomes simultaneously, strengthening resilience and equity across diverse communities.

USE OF AI IN MANUSCRIPT PREPARATION

The authors used generative AI tools (ChatGPT; OpenAI) to assist with language polishing and structural editing suggestions during manuscript preparation. All outputs were reviewed, verified, and edited by the authors, who take full responsibility for the content, accuracy, and integrity of the manuscript. No AI tools were used to collect, analyse, or interpret data, and no generative AI was used to write participant quotations or create original research findings. The use of AI complied with the COPE Position Statement on Authorship and AI and the journal's policies. No confidential or identifiable information was entered into AI systems.

Author Contributions

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Conflict of interest

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Data availability

The data underlying this article will be shared on reasonable request to the corresponding author.

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