



Master of Contemporary Education (MCE) Symposium July 2026

15th and 20th July 2026

C15P, C16P, and 2025 International cohorts

Executive summaries of project presentations

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Master of Contemporary Education C15P Cohort

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The Importance of Place and Community: *Enhancing Environmental Stewardship and Acknowledging Cultural Belonging in a Rural School*

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This practice-based change project, titled “The Importance of Place and Community: *Enhancing Environmental Stewardship and Acknowledging Cultural Belonging in a Rural School*”, aimed to uncover some of the pre-European history of the rohe (land) surrounding our small rural kura in South Otago, Aotearoa New Zealand. This was to be achieved through place-based learning experiences, focusing on environmental stewardship - kaitiakitaka. Prior to the project an analysis of our local curriculum delivery revealed a significant historical bias; while we covered the last 150 years of localised European history, pre-European indigenous histories, narratives, and land use remained almost completely invisible to both ākoka, kaimahi and the wider community. This project was designed to try to unearth and then bridge the

gap in this knowledge, so we could weave authentic bicultural perspectives into our kura's day to day life.

By partnering with the Hokonui Rūnanga and Waikoau Roopu, and utilising validated resources, the project sought to counter this historical amnesia (Penetito, 2009) and actively integrate localised oral narrative (pūrākau) and authentic ancestral names (ikoa wāhi) into the cultural story of our kura, growing a deep, authentic sense of place-based grounding and personal growth within ākoka. Therefore, fostering a stronger sense of belonging based on cultural understanding within our small rural kura.

Place-based learning is an educational philosophy where learning is intentionally anchored in the local landscape as a fundamental teaching tool. This approach acted as a powerful connector, inherently linking ākoka directly to the unique history of our rohe; while simultaneously fostering a deeper, more grounded sense of cultural belonging within our community (Penetito, 2009.) The inquiry question 'How might fostering a culturally responsive ethos, through place-based and bi-cultural learning, impact ākoka sense of belonging and connectedness within our small rural school community?' was driven through place-based learning.

The main participants were the Year 6-8 ākoka in my class, whom I taught 4 mornings a week. However, through the design of the project there were other beneficiaries, including other school members and the wider community.

Using an Action Research methodology (McNiff & Whitehead, 2010); which allowed for iterative collaborative cycles of identifying, planning, acting, observing and reflecting to address the needs and barriers as they arose, I was able to reflect and alter the cycles as required.

The project operated across two streams. Stream One involved direct hands-on classroom inquiry with the Senior cohort (Year 6-8) over five progressive iterations (plus one adaptive loop) designed to build knowledge and agency.

These cycles moved intentionally from establishing baseline data to immersive real-world experiences. Ākoka engaged in whole school hikoi, took on the role of 'cultural journalists (Gruenewald, 2003), translated their knowledge from the previous interactions into environmental kaitiakitaka and then co-designed permanent visual markers for our kura, including concepts for a large mural and the renaming of our classes/classrooms (akomaka) to ancestral names. Finally, we looped back, allowing ākoka to utilise their map skills, learnt in earlier iterations, to orientate themselves visually and spatially, anchoring their historical understandings onto/into the three-dimensional landscape.

Stream Two ran concurrently, working with teaching staff to continue to build our institutional capability and cultural competency, allowing/supporting the other staff to scaffold and validate the student led growth that was happening in Stream One. As we shared ākoka, this information was being disseminated through the kura both at ākoka and kaiako level. Scheduled staff professional development sessions were structured into regular staff meetings and Teacher Only Days to engage in learning such as engaging with He Poutama and looking at Janelle Riki-Waaka's work around Māori Achieving Success as Māori. Through these sessions kaimahi were courageous and reflective, often exposing and confronting their own bias, shifting success metrics from traditional Eurocentric parameters to a more holistic and individualised cultural identity and waiora (wellbeing) lens.

The conclusions drawn from the research evidenced a significant transformative shift in ākoka localised knowledge, grounding their sense of place. The effect of the agentic ownership of the knowledge was significant. When ākoka actively discover their local history, 'place' is no longer a neutral backdrop, it becomes a dynamic and pedagogical entity that is seeped with layers of history and relationships, place becomes an empowering teacher. By grounding the learning within localised narratives, it created an immediate, authentic relevance for ākoka. It highlighted to me how growing a true culturally responsive kura is ongoing and disruptive. The relationships we are

building centred on mana ōrite (Berryman et al., 2018) and will continue to enable this growth.

The project has merit as a blueprint for small rural kura across Aotearoa New Zealand, it illustrates when ākoka are supported with tools to navigate pūrākau and unearth local cultural histories, they build a sense of belonging, that is in turn reshaping the physical and cultural landscape of our kura. It has enriched not only ākoka and kaiako, but also the wider community, and has permanently embedded some of our local stories for generations of future ākoka.

Next steps for the project are to complete the work started on the tangible markers so kā ākoka can see that their work is valued, and we can continue to teach these narratives to all that come through our kura. It has shown the importance of knowing our rohe, and what information the land stores within it via ikoa wāhi. Our next significant step as a kura is to continue to maintain and grow the reciprocal relationship with our local rūnaka and roopu.

Through this project I hope I have shown the impact and importance of place-based education, despite being a very small kura. Although none of our participants were mana whenua, discovering the indigenous narrative of our rohe has given ākoka a strong anchor for identity and belonging. Because they were so agentic and active in finding and placing this information, they have an active and enduring ownership over the ongoing kaitiakitaka actions within the school and wider community.

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About the Author

Kaz has spent her teaching career in small rural schools as a parent, a teacher, and a teaching principal. Drawing from this deep lived experience of rurality, she sees local 'place' and environmental education as authentic, essential resources for learning. Kaz is committed to educational equity and collective flourishing. Her master's research directly reflects this passion, exploring how place-based learning and localised narratives can beautifully enrich ākoka belonging, cultural understanding, and community connection.





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Master of Contemporary Education C15P Cohort

Symposium 15 July 2026

A Space to Be Me: Creating Calm and Connected Classrooms

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The purpose of this project was to create emotionally safe classrooms by strengthening a school culture grounded in relational and mana-enhancing approaches. The project sought to build staff capacity to create classroom environments where all students experience connection, emotional safety and a sense of belonging, enabling effective learning to take place. While the project uses the terms classroom and environment interchangeably, the broader goal was to contribute to a culturally responsive and relational school culture felt across all areas of the school. This was important in our context because some children were experiencing school as overwhelming and needed support to regulate, which impacted their ability to engage in learning and experience connection and belonging.

The project had three goals: to create calm and connected classrooms through relational and mana-enhancing approaches; to strengthen school systems and practices by supporting a shift from reactive responses to proactive, relational and mana-enhancing approaches to student behaviour; and to make the concept of mana visible and meaningful within everyday classroom practice.

The project used an action research approach, allowing the inquiry to develop through iterative cycles of planning, action, reflection, and adaptation (Kemmis & McTaggart, 1992). The project developed through four distinct but connected iterations. It began with a focus on creating a regulation space within the Learning Support classroom, where students could go when they needed time and support to regulate. As the project developed, the focus shifted from the physical space to building the capacity of adults to create this sense of safety within everyday classroom practice.

The second iteration focused on professional learning that developed a shared understanding of the needs underlying behaviour including regulation, stress responses and felt safety, alongside relational approaches such as PACE (Hughes, 2017) and Emotion Coaching (Gottman et al., 1996). These approaches helped develop consistent school-wide language and responses to behaviour.

The third iteration involved reviewing and revising school behaviour documentation so that our processes better reflected proactive, relational and mana-enhancing practice. This was important because the existing documentation no longer aligned with the shared understanding being developed through the project.

The final iteration explored the concept of mana through Te Ara Whakamana (Ako Solutionz, n.d.; Hammond, 2021), iwi consultation, classroom resources and teacher planning discussions. This supported ākonga to consider how actions can enhance their own mana and the mana of others, while also strengthening mana-enhancing pedagogy. Partnership with iwi and kaumātua has been part of the project and remains ongoing, ensuring that resources and approaches

connected to mana continue to be grounded in local knowledge, tikanga and relationships.

A key outcome of the project was the shift from seeing calm and connection as something created through a dedicated space, towards understanding the role of adults, relationships, and systems in creating the conditions for regulation and learning.

Over time, professional kōrero supported a shift from locating behaviour solely within the child towards considering underlying needs, adult responses and the conditions that support safety.

The project also highlighted that relational practice is more likely to be sustained when school systems reflect the same approach. Reviewing and revising behaviour documentation was therefore significant, as it helped align school processes with proactive, relational, and mana-enhancing responses. This supported a shift from behaviour procedures based on reaction and consequence towards guidance that reflected behaviour as communication and supported more consistent adult responses.

A further insight was that mana provided a culturally sustaining way of understanding the conditions needed for ākonga to experience belonging, identity, safety and connection. Webber's (2024) concept of "mana-ful" classrooms, where mana can be enhanced or suppressed, was significant in helping me consider how adult actions, learning content and classroom conditions can affect whakaiti or whakanui mana. While staff and student understanding of mana is still emerging, the concept offered a valuable framework for strengthening relational, strengths-based and culturally responsive practice.

Overall, the project showed that supporting behaviour in relational and mana-enhancing ways requires more than a dedicated space or a set of strategies. It requires shared adult understanding, aligned school systems, strengths-based practice and authentic partnership with iwi. The significance for practice is a shift from managing behaviour to intentionally creating the conditions where learners can experience safety, belonging, connection and mana.

These insights may be useful for teachers, leaders and learning support teams who are seeking to strengthen relational responses to behaviour and create classroom conditions where ākonga experience safety, belonging, connection and mana. Overall, this project has laid the foundation for further developing mana-enhancing pedagogy in partnership with iwi and kaumātua, so that relational capacity continues to grow in culturally sustaining ways.

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About the Author

Gemma Bradburn is Deputy Principal at Te Ara Kahika One Tree Point School. Her professional interests include restorative practice, relational approaches, equity in education, culturally responsive leadership, and strengthening school systems to support belonging, connection and mana for all ākonga. She is committed to honouring Te Tiriti o Waitangi through leadership practice that values partnership, local knowledge, and culturally sustaining approaches to education.





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Master of Contemporary Education C16P Cohort

Symposium 15 July 2026

Blended Learning, an approach to help with student engagement and behaviour among year 10 students.

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Mā mua ka kite a muri, mā muri ka ora a mua

Those who lead give sight to those who follow; those who follow give life to those who lead.

This practice-based project, conducted in a Year 10 Technology (Hard Materials) classroom, investigated how a structured blended learning approach could increase student engagement and behaviour. This project was developed in response to challenges in our Technology space that commonly arise among our younger students, including off-task behaviour, inconsistent engagement, and heavy reliance on teacher-led instructions. Research by Fredricks et al. (2004) suggests that disengagement in a secondary classroom is often linked not only to learner independence but also to teachers' lack of clarity about

students' learning expectations. Many studies have demonstrated that blended learning improves students' motivation and participation (Tong et al., 2022) due to its flexible nature, which allows for various models to be implemented while maintaining a strong teacher-student relationship (Graham, 2013). Instead of replacing hands-on workshop practice, this model was created to support students during downtime, increase clarity for all students, and allow them to take more ownership of their different learning experiences.

The one outcome goal for this project was to increase students' engagement by introducing various ways for students to access instructions and view demonstrations, recognizing students' different learning abilities. (Means et al., 2013) The second outcome was to ensure that student behaviour was addressed by minimizing confusion and students not knowing what to do (Emmer, 2014), which sometimes leads to students being disruptive, and by addressing the length of the lesson, which is currently 1.5 hours. Another goal emerged throughout the project: to strengthen students' accountability and independence, ensuring they are capable of sustaining their own-paced learning, reflection, and progress tracking. These goals were strengthened by culturally sustaining pedagogy, which ultimately values students in your classroom, accepts all cultural identities, fosters trust, and ensures that your learning environment is inclusive for all students. (Khoironi Fanana Akbar et al., 2023)

Khoironi Fanana Akbar et al. (2023) note that although the teacher wants to create an inclusive model for all students, it also faces various challenges related to student accessibility and teacher training in this space.

A project was implemented in our Year 10 Hard Materials Technology cohort, with a specific outcome. A blended learning structure was introduced, combining face-to-face teaching with new learning resources to be posted on an online platform. This change came about because so many ELL students transition into our space, and I thought it would work not only for them but for all students present in the classroom. Various core content, such as criteria, project requirements, exemplars, and step-by-step photos and videos, was provided to guide students through the whole process. Zimmerman (2002) also

concludes that when a teacher provides digital resources on demand, it will allow for students to revisit and learn when needed, which introduces the interdependence and self-regulation of the student.

By doing this, students develop self-regulation, which is defined by Zimmerman (2002) as "referring to self-generated thoughts, feelings, and behaviours that are oriented to attaining goals". Zimmerman (2002) further states that this is a necessary skill students need to develop for the future, as one of the main functions of education is the development of lifelong skills, which students need once they leave school.

Students need a structured routine at school, as this is what happens when they leave school and enter the workforce. To help students understand this, a weekly planner was provided to ensure that students know what to expect and when. Constant reminders via email and set work that reached each student kept them on track. As in any job, when students enter the class, a roll call will be taken and a brief overview of the day's expectations will be given. This would include uniform online forms to be filled out, check-in with your partner, and, if any group member is away, what would the solution of the day be? Following these routines, behaviour expectations were acknowledged for each student to ensure that all necessary work was completed within the allotted time. During this time, each member of the group needed to demonstrate the correct understanding of each stage of the project before they were allowed to progress. This aligns with Black & Wiliam (2009), who argue that formative assessment can improve students' engagement and learning.

Within these findings, there is a clear and visible improvement among students. The introduction of Blended learning in the Hard material space was very practical as students demonstrated much more on-task behaviour, especially during practical sessions, working more independently rather than waiting for teacher instructions, and meeting the needs of autonomous learners. (Wang & Zhang, 2022) Students took charge of their learning, reducing disruptions and repeated questions (which occurred every 2 minutes), thereby creating a quieter and safer classroom. The previously disengaged students were now more responsive and taking more charge in all

areas. This was because students could serve as group leaders (They tell the rest of the group what to do), as this relates to a real-world scenario where they might be in charge of people at any point in time. Students who were normally shy came out of their shells and took charge of their group's learning and ability to create great projects. This relates well to Powell et al. (2015), where they quote that: "Blended learning, particularly models supported by adaptive learning programs and tools, enables teachers to match the right student with the right content at the right time. In other words, blended learning should be approached not merely as a temporal construct, but rather as a fundamental redesign of the instructional model."

So, in conclusion, this project was highly effective within the technology practical space when it was intentionally differentiated and made for all students. All resources produced clarity throughout and reduced confusion among students. This project allowed students to progress independently and work collaboratively, without isolating students. In the end, it demonstrated that blended learning is not just a digital innovation but a pedagogical shift that improves engagement and behaviour.

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About the Author

Christo Brits is a Technology Teacher at Manurewa High School, specialising in hard materials, wood technology. He has extensive experience working with diverse learners and is known for creating positive, well-structured learning environments built on strong relationships, clear expectations, and mutual respect.



His professional interests focus on blended learning, culturally responsive practice, and inclusive teaching approaches that improve student engagement, behaviour, and achievement—particularly for Māori and Pacific learners. Christo integrates digital tools with hands-on, authentic projects, enabling students to develop practical skills, problem-solving abilities, and confidence. He is passionate about real-world learning and frequently leads projects that support the school and wider community, reinforcing the value of meaningful, purpose-driven education.



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Master of Contemporary Education C16P Cohort

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Integrating Artificial Intelligence with Writing Instruction in a Primary School Classroom

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Mā te kimi ka kite, Mā te kite ka mōhio, Mā te mōhio ka mārama

Seek and discover. Discover and know. Know and become enlightened.

This research project investigates the integration of Generative Artificial Intelligence (GenAI), specifically the Sidekick feature on SchoolAI, within a Year 5/6 writing program at a New Zealand primary school. Utilizing an Action Research methodology and a Blended Learning framework, the study addresses the global and local challenge of writing underachievement by exploring how AI can support students in mastering complex paragraph structures while mitigating cognitive overload. It specifically addresses how AI-student interactions influence writing achievement during the planning, drafting, and revising stages of the writing process.

Writing achievement remains a significant challenge, with only 33% of Year 6 students in Aotearoa reaching expected curriculum levels in 2025. Writing is

a complex cognitive task requiring the simultaneous management of transcription and composition; in educational settings, high student-to-teacher ratios often prevent the immediate, personalized feedback necessary to scaffold this process. While AI can serve as a personalized guide, its integration carries the risk of 'cognitive debt' (Kosmyna et al., 2025), the learning deficit created when AI-generated content bypasses the mental effort essential for skill mastery. This occurs primarily when the technology is used as a substitute for, rather than a collaborator in, the cognitive process.

In this project, I carried out three research iterations focused on the contribution of AI to different stages of the writing process: drafting, expanding details and feedback. I used a mixed-methods approach to triangulate data; this included a quantitative comparative analysis of pre- and post-writing samples alongside a qualitative reflexive thematic analysis of AI-student chat logs and reflections, to categorise the support provided and student attitudes.

Participants were first introduced to the nature of AI, including its functional applications, inherent limitations, and associated ethical concerns. Following this, I established a structural framework for paragraph writing, focusing on a robust topic sentence, the integration of two to three supporting details, and a concluding sentence that synthesizes the central theme.

The first iteration explored the value of AI in supporting the planning phase, while the second investigated its utility in expanding the details. The third iteration was concerned with the kind of feedback the AI tool could provide.

The results of this research confirm that AI is not a 'magic bullet'. In the planning stage, a modest mean improvement of 0.33 in writing scores occurred. The AI tool often bypassed students' cognitive struggle deemed necessary for neural pathways to establish and develop (Kosmyna et al., 2025), by providing full sentences.

The implementation of AI during the detail expansion phase yielded a 22.2% increase in average achievement. Notably, the achievement gap between high and low performers narrowed, suggesting that the AI tool acted as an effective scaffold that raised the 'collective floor' of the cohort.

In the last iteration, the AI tool demonstrated high utility by providing rapid, multi-criteria feedback that would be difficult for a single teacher to provide to a full class.

My findings confirm current literature (Graham, 2023) suggesting that AI can lower barriers for struggling and neurodiverse writers by automating the mechanical burden of first drafts, allowing them to focus on higher-order editing. Conversely, it reinforces Kosmyna et al.'s (2025) warning regarding cognitive debt, emphasizing that AI should be a late-stage collaborator rather than an early-stage replacement for the productive struggle of writing.

From the analysis of the AI-learners' interactions, I concluded that for primary students, AI is most effective when it provides direct examples (Modelling) rather than leading through questioning (Tutoring), which can cause cognitive overload. Instruction must prioritize prompt engineering and paraphrasing to ensure students steer the technology and avoid cognitive debt. Educators should utilize multimodal features (like listening and speaking) to empower neurodiverse learners, as the data showed these tools allowed students with no writing ability to independently devise complex plans.

Although the study only involved 10 participants, this can be seen as a microcosm revealing attitudes and struggles of this generation as they grapple with new and emerging AI technologies. Educators must find ways to navigate a paradox where students often prioritize the final product over the learning process. To mitigate this, teachers should design assignments that value human qualities and creativity over mere task completion. By emphasizing that the "struggle to learn" is the goal, rather than the finished paragraph, teachers can help students move away from using AI as a search engine and toward using it as a collaborative partner.

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About the Author

Micaela Cabodi Wilkes is a primary school teacher and postgraduate researcher currently completing a Master of Contemporary Education. Born in Italy and now settled in Aotearoa, she combines her passion for literacy with an inquiry-led approach to teaching. As a reflective practitioner, Micaela is committed to exploring how innovative pedagogical tools can support diverse learners in the writing process.





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Master of Contemporary Education International 2025 Cohort

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Year 12 Student Agency Responses to the Implementation of the Tō Tātou Whakapono Our Faith Curriculum

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Ka moroki te rito o te harakeke, ka tupu he rito hou

As the outer palm frond leaf dies, a new shoot rises and unfurls

Educational spaces across Aotearoa New Zealand are currently navigating significant shifts in curriculum delivery, moving away from rigid instruction toward models that empower learners to actively shape their educational experiences. Within Catholic secondary education, this transition presents a unique challenge when balancing historical faith-based doctrines with modern student autonomy. In this practitioner research project, I examined how Year 12 senior students respond to the gradual implementation of the new Tō Tātou Whakapono – Our Faith curriculum within an all-boys Catholic secondary school in South Auckland. While educational literature extensively documents student agency and culturally responsive pedagogy in secular settings, I found

limited empirical evidence regarding how these concepts operate when woven directly into secondary religious education frameworks. My primary purpose was to investigate how positioning learners as active co-constructors of knowledge might enhance their ownership of learning, spiritual growth, and cultural identity. Two targeted sub-questions guided my inquiry, focusing on how senior student agency responses influence daily teaching decisions and how specific teacher practices might either nurture or inadvertently constrain student expression.

To address these questions, I utilised a qualitative-dominant case study methodology, which, following the recommendations of Yin (2018), was highly appropriate for capturing a deeply contextualised snapshot of a bounded system. Over a comprehensive nine-week fieldwork period, I embedded myself as an insider researcher within the Year 12 cohort to build a well-rounded, triangulated understanding of our classroom dynamics. The core participants included senior Year 12 students alongside their religious education teachers. My primary data collection involved qualitative classroom observations across two separate religious education sections to systematically document real-time student interactions and lesson deliveries. I supplemented these observations with a phased focus group discussion structure involving database tracking of eight randomly selected senior students, conducted across the end of Term 1 and the beginning of Term 2 to allow for deeper participant reflection. Furthermore, I carried out semi-structured interviews with two participating teachers to capture their instructional goals. To balance individual narratives against broader cohort trends, I also distributed a quantitative perception survey to a larger pool of Year 12 students.

I manually analysed the resulting qualitative transcripts and field observation logs through a deductive coding process, deliberately mapping student and teacher discourse onto the three dimensions of the Ecological Model of Agency developed by Priestley et al. (2015). This framework helped me evaluate how agency is dynamically achieved through a continuous interplay between a person's past experiences, their future orientations, and the immediate structural opportunities or limitations present in their environment. I

summarised the quantitative data from the student survey into mean score matrices to directly cross-reference and triangulate with my core qualitative themes, ensuring data authenticity and minimising compliance biases.

My findings revealed a compelling tension between institutional material constraints and relational teaching practices. In the practical-evaluative dimension, I noticed a significant conflict emerging between standardised assessment expectations and learner autonomy. Both qualitative focus group transcripts and quantitative survey data indicated that highly rigid writing frameworks, specifically the Point, Evidence, Explanation, Link (PEEL) paragraph layout, acted as a severe material constraint. While these templates provided academic safety to meet high marking standards, they simultaneously caused the boys to view their classes as a compliance checklist rather than a space for deep theological discovery. Conversely, the iterative dimension highlighted that authentic student agency was successfully unlocked through relational pedagogy and structured personal reflection. Implementing the pastoral Scripture, Observation, Application, Prayer (SOAP) framework served as an ideal culturally responsive bridge. During the application phase, students felt safe to bring their past familial stories and cultural backgrounds directly into the course material, transforming the classroom from passive listening to enthusiastic, student-led inquiry. Teachers actively utilised these student voices as an instructional compass, regularly adapting their daily lesson steps around the spiritual realities that the boys shared.

From a projective dimension, my data uncovered an important dual reality regarding cultural responsiveness and equity under Te Tiriti o Waitangi obligations. Following the assertions of Gay (2018), academic involvement increases substantially when classroom instruction directly reflects the real-life cultural experiences of ethnically diverse students. Although the new curriculum successfully fostered meaningful belonging for Māori and Pasifika students by embedding te reo translations and values like whanaungatanga, I identified a distinct cultural silence regarding minority migrant groups, like a Filipino-Chinese student I got to interview. Focus group narratives revealed that these smaller student populations occasionally felt instructionally

overlooked within the broader bicultural landscape. This insight emphasises that to achieve a truly equitable environment, we must intentionally broaden our instructional choices to embrace the absolute multicultural diversity of the modern student body.

On a personal level, this research has profoundly transformed my practice, enhancing my critical reflexivity and prompting me to transfer these relational frameworks directly into my own science classrooms to promote active participation. Beyond my own practice, this project builds organisational capacity by providing data-driven resources to my colleagues. I am currently advancing two specific deliverables: a practical reflection toolkit designed to assist educators in embedding these reflective frameworks into their daily routines, and a professional development presentation delivered during our fortnightly school learning groups. These contributions aim to shift school-wide teaching cultures away from rigid compliance toward transformative, relational environments where every student's cultural narrative is visibly celebrated.

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Fernando Campaña is a classroom teacher at an all-boys Catholic secondary school in Māngere, South Auckland. Holding a Provisional Practising Certificate (Tōmua), he brings over 12 years of international teaching experience from the Philippines. Fernando currently teaches Biology and General Science across Year 9 to 13, alongside secondary Mathematics. He is passionate about making learning fun and instilling a “never give up” attitude so his students achieve their full potential. Outside of school, Fernando enjoys watching movies, reading inspirational books, and playing retro video games. Above all, he cherishes spending quality time with his wife and their two daughters, as well as with extended family and friends





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Master of Contemporary Education C16P Cohort

Symposium 15 July 2026

Integrating digital technologies to improve student engagement and achievement in the Numeracy CAA.

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He waka eke noa.

We are all in this together.

This practice-based change project was conducted at Manurewa High School, to address persistent challenges with student engagement, equity and achievement in the Year 11 Numeracy Common Assessment Activity (CAA). School data showed large discrepancies – especially for Māori and Pacific learners, plus overall low pass rates. This highlighted a disconnect between traditional classroom practices and the digitally assessed nature of the CAA, as well as a lack of culturally meaningful learning experiences. Therefore, my project set out to design, implement, and evaluate an approach to more effectively engage students in numeracy - one that integrates digital technologies with culturally sustaining pedagogies.

The overall guiding expectations for the project were threefold: to increase student engagement across behavioural, emotional and cognitive domains; to increase students' confidence- and self-efficacy around numerate behaviours; and to improve rates of achievement on Numeracy CAA through purposeful use of digital tools and culturally responsive learning contexts. The project, derived from an Action Research approach, enacted the cycles planning → acting → observing → reflecting (Kemmis & McTaggart, 1988), iterative through evidence and student voice. The study uses a qualitative and quantitative mixed-methods approach which contained: achievement results, survey responses from the student voice, focus groups and teacher reflections (Creswell & Plano Clark, 2018).

The intervention took place in a Year 11 class over Term 2 2025 and comprised the use of digital tools including Microsoft Teams and Education Perfect paired with culturally responsive numeracy tasks. Numeracy tasks that linked to the Numeracy CAA and were associated with students' real-life learning. Questions were based on Polyfest, Manurewa Maara, School lunch programme, budgeting, school sports statistics and real measurement. These activities provided multiple modes of engagement and representation. It was developed consistent with the Universal Design for Learning principles (Smith Canter et al., 2017), designed to mitigate learning barriers, increase confidence, and cognitive engagement through active problem-solving.

Results show a significant positive effect of the intervention. Both post-intervention Numeracy CAA pass rates for the intervention group (77.3%) and control group (36%) indicated significant achievement gains. Students who were more engaged in the intervention were even more successful than those who had less involvement. Qualitative data showed students were more confident, informed and motivated to learn and that digital tools improved interactivity, accessibility and purpose in learning for many. Engagement also benefited as interactive and visual learning facilitated enhanced understanding of mathematical concepts (Laurillard, 2012).

But the results also showed that relying on digital technologies alone does not solve equity issues. Although the overall achievement improved, significant

gaps persisted for Māori learners and therefore culturally sustaining pedagogies needs to be at the heart of practice (Paris & Alim, 2017). This project reinforced that meaningful engagement is more than getting the task done, and needs behavioural, emotional, and cognitive components (Fredricks et al., 2004). Furthermore, it emphasised the necessity of teacher support as students stressed that in addition to digital tools for learning they required clear instruction and relational connectedness also supported by effective teaching research (Hattie, 2009; Rosenshine, 2012; Timperley, 2011).

Some key messages arising from this work include the importance of a balanced approach to numeracy teaching that builds on the foundations provided by effective use of digital technologies, culturally sustaining pedagogies and grounded relational practice. Frameworks including TPACK promoted an intentional alignment of technology, pedagogy and content (Mishra & Koehler, 2006), whilst the Educultural Wheel focused on relationships, care and climate in classrooms (Macfarlane, 2004). The student engagement frameworks also reinforced the importance of designing learning experiences that promote deep thinking and meaningful engagement over surface-level involvement (e.g., Schindler et al. 2017).

Leadership, especially through adaptive and instructional leadership, was critical to enabling this project. The principle of adaptive leadership provided the guiding framework for addressing complicated challenges such as student disengagement, inequity and resistance to change through adaptive means, realising that working on technical solutions alone does not resolve underlying issues but requires changes in beliefs/practices/ relationships (Heifetz et al., 2009). Instructional leadership connected digital technologies with effective teaching practices and culturally sustaining approaches (Timperley, 2011; Robinson et al., 2009), ensuring that there was a clear focus on quality teaching and learning processes at the same time. The combination offered an opportunity for a focus on the overall improvement of numeracy outcomes without neglecting student needs. Leadership was not imposed top-down; it occurred collaboratively through professional dialogue and evidence-based decision-making to support sustainable change across the Mathematics

Learning Area.

This project is relevant to the classroom, but its importance goes far beyond the classroom. It offers an actionable, evidence-informed framework for embedding digital technologies in pedagogically meaningful and culturally sustaining ways (Mishra & Koehler, 2006; Paris & Alim, 2017; Laurillard, 2012). The results speak to wider debates about education equity, where it is shown gaining numeracy success involves more than just a programming fix; getting it right means fundamentally altering teaching practices, curriculum design and leadership methods. The project also showcases Action Research as a powerful tool for professional learning, encouraging me to reflect critically on my practice and respond to my learners' needs.

This work will be of more interest to teachers and leaders working in diverse contexts as it shows how student voice, digital tools, and culturally relevant pedagogy can be aligned to increase engagement with content to improve achievement. It is scalable and adjustable allowing for wider application in spaces throughout the Mathematics Learning Area and beyond. So, at the end of the day, this project helps clarify that improving outcomes in numeracy is not merely about skill development but rather relies on creating learning environments that are inclusive, relevant and empowering for all learners.

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Master of Contemporary Education 2025 International Cohort

Symposium 15 July 2026

Culturally Responsive Pedagogy Enhances Collaboration between Immigrant and Non-Immigrant Students

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He waka Eke Noa

We are all in this together

Culturally responsive pedagogy is an important educational approach that recognizes, values, and integrates students' cultural identities, languages, and lived experiences into teaching and learning. In culturally diverse classrooms, it supports inclusion by helping students feel respected, confident, and connected to learning. Peer collaboration is also an essential part of primary education as it enables students to communicate, share ideas, and learn through social interaction. In diverse classroom settings, effective collaboration between immigrant and non-immigrant students is important for promoting equity, participation, and belonging. This project explored how culturally responsive pedagogy supports peer collaboration between immigrant and non-immigrant students in two culturally diverse Year 4 classrooms in Aotearoa New Zealand.

The purpose of this project was to investigate how culturally responsive pedagogy influences peer collaboration, participation, and students' sense of belonging. It focused on how teaching practices that recognize students' cultural identities, languages, and experiences influence their engagement, confidence, and ability to participate in group learning activities. It also aimed to identify practical strategies that support inclusive classroom environments where all students feel valued, respected, and able to contribute meaningfully.

This research was conducted as a mixed-method case study. Data were collected through three classroom observations (one literacy lesson and two mathematics lessons), two semi-structured teacher interviews, and a student focus group involving four immigrant and four non-immigrant students. During the lessons, students engaged in collaborative learning tasks such as group problem-solving, shared reading, and structured discussions that encouraged interaction. Teacher interviews explored how culturally responsive pedagogy was implemented in practice, while student discussions provided insight into learners' experiences of collaboration, participation, and belonging. Ethical principles, including informed consent, confidentiality, respect, and voluntary participation, were followed throughout the study.

Data analysis combined qualitative and quantitative approaches. Qualitative data from interviews, and focus groups were analyzed using Braun and Clarke's (2006) six-phase thematic analysis to identify key patterns related to culturally responsive teaching and peer collaboration. Quantitative data from structured observation checklists were analyzed using frequency counts to examine how often specific teaching strategies and collaborative behaviors occurred. Combining both methods strengthened the trustworthiness of the findings through triangulation.

The findings showed that culturally responsive pedagogy positively influenced peer collaboration. Students worked cooperatively in mixed-cultural groups, shared ideas, listened respectfully, and supported one another during learning activities. Teachers reported that using multicultural stories, connecting learning to students' cultural backgrounds, and intentionally organizing mixed groups improved engagement and interaction. These findings

support Gay's (2018) view that culturally responsive teaching enhances engagement by connecting learning to students' cultural identities.

The findings also align with Berryman et al. (2013), who emphasize that culturally responsive methodologies are grounded in respect, reciprocity, and student voice. Teachers highlighted that relationship-building and valuing student perspectives were essential for effective collaboration. In addition, Berryman, Lawrence, and Lamont (2018) highlight that culturally responsive pedagogy is built on strong cultural relationships and a bicultural understanding of teaching and learning, which supports inclusive education in Aotearoa New Zealand.

However, the findings also identified challenges. Although culturally responsive teaching supported inclusion, some immigrant students continued to experience difficulties with academic vocabulary and lacked confidence in group discussions. This showed that cultural responsiveness alone is not sufficient to ensure equitable participation. Instead, effective practice requires combining culturally responsive pedagogy with explicit language support such as vocabulary scaffolding, modelling academic language, and structured speaking opportunities. These findings align with Vygotsky's (1978) sociocultural theory, which emphasizes learning through social interaction.

A key insight from this project is that culturally responsive pedagogy must be intentional and structured. Before this study, I understood it mainly as recognizing cultural diversity. However, I learned that it requires deliberate teaching design that supports communication, confidence, and equitable participation. Simply grouping students does not guarantee collaboration; teachers must intentionally structure learning experiences to promote inclusion.

This project also highlighted that culturally responsive pedagogy is most effective when combined with targeted language support. This finding contributes practical knowledge for schools by showing that both cultural recognition and language scaffolding are necessary for supporting immigrant learners in collaborative classrooms. It also emphasizes that inclusion is an ongoing process requiring reflection and adaptation.

The project contributes practical insights for teachers, school leaders, and researchers. It shows that strategies such as mixed-group learning, culturally relevant teaching, respectful communication, relationship-building, and vocabulary support can strengthen peer collaboration and student belonging. These findings provide classroom-based evidence supporting inclusive and equitable teaching practices.

The findings were shared with participating teachers through a summary poster and informal discussion, encouraging reflection on how collaborative tasks can be designed more intentionally. Overall, this project contributes to the growing research on culturally responsive pedagogy in Aotearoa New Zealand and highlights the importance of relational and responsive teaching practices in primary classrooms.

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Vishuddhi Omesha Chandrasiri is an experienced educator with seven years of teaching experience as a registered teacher in Sri Lanka. During her teaching career, she also served as an examination invigilator and as the Head of the Secondary Section, where she demonstrated leadership and supported the effective management of teaching and learning.

She is currently working as a Teacher Aide in an early childhood education Centre in New Zealand, where she supports young children's learning, development, and wellbeing. Her professional interests include early childhood education, inclusive education, and creating positive learning environments that foster children's learning and development.

Through her educational experiences in both Sri Lanka and New Zealand, Vishuddhi has gained valuable insights into diverse teaching practices and cultural perspectives. She is committed to lifelong learning and continuously developing her professional knowledge and skills to provide high-quality educational support.





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Enhancing Mathematics Teaching Through Targeted Professional Development in Digital and AI Capabilities: Insights from a Practice-Based Action Research Project

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Digital and artificial intelligence (AI) technologies are transforming education and creating new opportunities to enhance teaching and learning. Although many schools have access to digital technologies, teachers often need ongoing professional learning to integrate them confidently and meaningfully into classroom practice. Rather than simply learning to use digital tools, teachers need support to align technology with effective pedagogy, curriculum goals, and students' diverse learning needs. This practice-based action research project explored how targeted professional development in digital and AI capabilities supported a secondary mathematics teacher to strengthen confidence in integrating technology into classroom practice. It also examined how developing teacher capability could influence students' learning experiences and inform future professional learning in mathematics education.

The project was conducted in a New Zealand secondary school using an action research methodology (Kemmis et al., 2014). A collaborative partnership was established with a Year 9 mathematics teacher to identify professional learning needs, implement targeted professional development, observe classroom practice, and reflect on teaching. During the professional development sessions, the teacher learned to use Smartboard features, E-Class software, and interactive mathematical simulations to support more engaging mathematics lessons. Classroom observations and reflective discussions enabled the teacher to evaluate these approaches, identify opportunities and challenges, and consider how digital technologies could better support student learning. Data were collected through classroom observations, a teacher interview, researcher reflections, and project artefacts, providing rich evidence of teacher learning and professional growth.

The project demonstrated that meaningful technology integration extends beyond introducing teachers to new digital tools. Through collaborative, practice-based professional learning, the participating teacher became more confident in using Smartboard features, E-Class software, and interactive mathematical simulations to support classroom teaching (Amemasor et al., 2025). Classroom observations showed that digital technologies alone did not automatically improve student engagement. Instead, effective integration depended on thoughtful lesson design, appropriate pedagogy, classroom management, and the teacher's professional judgement. Reflecting on the potential of AI-supported learning, the teacher explained, *"No, I don't think so... you still need a human mind,"* emphasising that AI should support rather than replace teachers. These discussions also led to the collaborative design of a concept for an AI-supported mathematics learning application featuring lesson videos, practice activities, personalised progress tracking, and instant feedback to complement classroom learning.

One of the most significant outcomes of this project was the professional learning it created for me as a researcher and mathematics educator. At the beginning of the project, I believed that introducing teachers to digital

technologies would be enough to support meaningful classroom integration. However, working collaboratively with the participating teacher, observing lessons, and reflecting on each professional development session showed me that sustainable technology integration depends on pedagogy, curriculum goals, and learners' needs rather than technology alone. The teacher's willingness to trial new digital approaches and reflect on classroom experiences also demonstrated that effective professional development is collaborative, iterative, and responsive to teachers' contexts. My understanding of AI similarly evolved from viewing it as an innovative digital tool to recognising its potential to complement teacher expertise and support personalised learning while preserving meaningful teacher–student relationships.

The project also reinforced the importance of culturally responsive practice, collaborative leadership, and reflective practice throughout educational change. Building respectful relationships, listening to the participating teacher's perspectives, and making decisions collaboratively strengthened both the professional learning process and the quality of the research. Regular reflection ensured that each professional development session responded to the teacher's classroom experiences and emerging needs, demonstrating that meaningful educational change is achieved through collaboration, trust, and continuous reflection rather than implementing predetermined solutions.

Although this was a small-scale practice-based action research project involving one teacher in a New Zealand secondary school, it provides practical insights into how targeted professional development can strengthen teachers' digital and AI capabilities in authentic classroom settings. Rather than claiming broad generalisability, the project demonstrates how collaborative professional learning can build teacher confidence, encourage reflective practice, and support meaningful technology integration in mathematics education. The findings also reinforce the importance of integrating technological, pedagogical, and content knowledge to support effective classroom practice (Mishra & Koehler, 2006). Future research could extend this work by

implementing and evaluating AI-supported mathematics learning applications across a wider range of schools. Overall, this project demonstrates that collaborative, practice-based professional development can help teachers integrate digital and AI technologies confidently while maintaining the central role of effective pedagogy and professional judgement.

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Obina Muni Jagath Chandrathilaka is an experienced mathematics educator with 17 years of secondary teaching experience in Sri Lanka. He completed the Master of Contemporary Education at academyEX in New Zealand. His professional interests include mathematics education, teacher professional development, digital capability, artificial intelligence in education, and technology-enhanced learning. His research focuses on supporting mathematics teachers to integrate digital and AI technologies through collaborative, practice-based professional learning.





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Master of Contemporary Education C14P Cohort

Symposium 15 July 2026

The Gender Gap in NCEA English: Universal Design for Learning to Develop Student Agency and Engagement

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Purpose:

Years of NCEA NAME (not achieved, achieved, merit and excellence) literacy data was showing the same, pervasive issue. Disaggregated by gender, the data shows that male students persistently underperform female students in English. This gap is shared both locally at Geraldine High School and at the national level. In Level 2 English, some male students arrived with a negative mindset about writing and about themselves as writers. They were disengaged before the task had even begun. Universal Design for Learning (UDL) offered an opportunity to remove some of the barriers these students were facing before the lesson had begun, rather than remediate afterwards (CAST, 2018). My big question became - "Can designing lessons with UDL support male students with a negative mindset in Level 2 English?"

Project goals:

After I had observed and verified the gap, my next step was to find out whether UDL lesson design could shift the male students' mindsets, engagement, and achievement. Three iterations were implemented and a further one planned. Any gains designed for one group must not come at the expense of another. Avoiding disadvantaging any group of students thus became a success condition of this research, not just an afterthought (Alloway & Gilbert, 1997).

Design and method:

As the teacher and the researcher, I used interpretivist practitioner action research. Two cohorts signed consent forms: Cohort A consisted of eleven students in one Year 12 class across Terms 3-4, 2025; Cohort B consisted of thirteen students in two Year 12 classes across Terms 1-2, 2026. The data was collected by a 29-item survey, Hāpara analytics, Classroom conversations, and KAMAR achievement data. A thematic analysis (Braun & Clarke, 2006) of the written responses and statistics was used to inform each cycle. Ethics approval was obtained from Geraldine High School's principal, academyEX, the students and their whānau.

The four iterations:

Iteration 1 used Explicit Direct Instruction (EDI) constructed through the lens of Universal Design for Learning (UDL). This gave the students a system of consistent lesson structure to support students' mindsets. Iteration 2 incorporated audio and dictation scaffolding as an option to improve student access to the learning. Iteration 3 gave students a choice of activities and option to incorporate the students interests to measure the effect on mindsets. Iteration 4 produced a professional development supporting teachers to track and improve mindsets, based on the findings from this project (planned, but not implemented).

Conclusions:

From Cohort A, the male students' mindset scores increased across all three surveys. The gender gap mindsets narrowed noticeably. School achievement data improved from 2024 to 2025 - Not Achieved in males halved, while Excellence results grew. Female results also improved on every band over the same period. This proves the success condition of gains for the males, without decline for the females was met. Cohort B ran over a single iteration cycle from a lower baseline and showed a flatter trend than Cohort A.

Honest limits:

The findings of the vulnerability index showed the male scores increased and the female scores decreased. The written responses gave few clues as to why, but this was a noticeable cost that was recorded and not explained away. These findings are promising alignment, but not proven causation. The raw achievement data was collected from one year group with no control group, small numbers, from one teacher, in one school. The Well-Being survey consisted of twenty-nine questions. The first twenty-six are asking students to score themselves on a scale from either 1-5, 1-6, 1-10, and the last three were written responses the students could answer in their own words.

Insights and significance:

My three themes from the written responses were: "A clear path into the writing," "The change was perception," and "The same screen, both doors," and my counter theme was "The design did not reach everyone." I also counted the blank responses as a finding. Out of a possible 135 written response opportunities, I gained 105 responses and 30 blank responses. The blanks matter as the purpose of this project was to support students with their writing, so it is natural some would struggle to express themselves in these spots. Capp's (2017) meta-analysis found UDL's processing gains are well-evidenced, but outcome gains are unproven. My research aimed to track this claim, so the findings should be read with care to its limitations. Also, UDL

implemented without cultural responsiveness can increase gaps that it aims to close (Kieran & Anderson, 2019). The interventions were well-practiced interventions such as lesson structure, expression options, and choice are available to any teacher, but designing to the students' cognitive barriers is what made the data collection valuable. I intend to continue measuring student well-being on a smaller scale to support mindsets in my classroom. My PD cycle will go ahead, with my colleagues' participation.

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Bevan Daw is the Assistant Head of Department for English at Geraldine High School, where he teaches English and ESOL. His professional interests centre on developing Universal Design for Learning with practitioner action research. He is working to remove barriers to writing and supporting student mindset and engagement in NCEA English.



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Analysis of the use of Generative AI at Kōwhai Intermediate School

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The rapid evolution of Generative Artificial Intelligence (GenAI) has introduced an explosion of tools into the education market, often positioning themselves as the definitive solution for time-poor teachers. Colbentz et al. (Colbentz et al., 2026) found that 83% of teachers surveyed in 2026 were motivated to reduce the time spent on administrative tasks, and these findings would have been a fair reflection on where things were at at Kōwhai prior to undertaking this research. At Kōwhai Intermediate School, the emergence of these tools initially led to inconsistent and sporadic adoption, with some teachers experimenting in isolation while others remained hesitant due to concerns regarding privacy, ethics, and digital fluency. The purpose of this practice-based change project was to address this disparity by fostering a consistent, ethical, and pedagogically-led integration of GenAI across the staff. By focusing on a "pedagogy-first" approach, the project aimed to move beyond simply using new technology for technology's sake, instead finding tools that fit specific educational needs while adhering to security and privacy standards.

The primary goals of the project were to gain a comprehensive understanding of current GenAI usage and attitudes among staff, and to support teachers in integrating these tools into both their teaching practices and professional workflows. A critical objective was to increase overall digital competency by focusing on trusted, free tools within the Google Workspace for Education suite, specifically Gemini and NotebookLM, which are covered under the Google Workspace for Education agreement. Furthermore, the project sought to bridge the gap between school leadership's strategic vision and the practical, daily needs of teachers on the ground. Utilising an Action Research methodology and acting as an "Insider Researcher" (Coghlan, 2019), I designed a three-part intervention consisting of a pre-survey, a 1:1 GROWTH coaching session, and a post-survey. The initial survey captured a baseline of existing knowledge, attitudes, and concerns, revealing that while teachers recognised the potential of AI, they felt a lack of professional development to implement it meaningfully, findings that were consistent with what was published in findings by the Ministry of Education in guidance to schools released in 2024 (Ministry of Education, 2024). Following this, I conducted bespoke 45-to-60-minute coaching sessions guided by the GROWTH model [Goal, Reality, Options, Will, Tactics, Habits] (Whitmore, 2017). These sessions were collaborative and reciprocal, drawing on the Tuakana Teina framework, where both the coach and coachee learned from one another's expertise (University of Auckland, n.d.). During these sessions, I modelled GenAI tools to solve specific professional challenges, such as reducing administrative burdens and personalising resources for diverse learners. Participants were also introduced to the SAMR model to help them move from simple technological substitution to transformative practice (Puentedura, 2006). The data collected from the project provided several clear conclusions. The coaching intervention significantly shifted participant confidence; the majority of teachers moved from being "unsure" or having "no confidence" to being "mostly" or "very" confident in their ability to use GenAI for professional tasks. The frequency of use transitioned from sporadic to regular across the board. Perhaps most importantly, participants felt that the 1:1 support adequately prepared them to use these tools, a stark contrast to their feelings prior to the

coaching. The project demonstrated that teachers are eager to use GenAI to reclaim time from administrative tasks, such as reporting and lesson ideation, to focus more on core teaching and learning. The insights gained from this project have significant implications for educational practice. First, it highlights that 1:1, contextualised professional development is far more effective than "one-size-fits-all" sessions, particularly for complex and rapidly changing technologies like AI. Second, the "insider researcher" status is a powerful catalyst for change; the pre-existing trust and understanding of a colleague's context allow for immediate, relevant application of new skills. Third, the project underscores the importance of clear school-wide policies and leadership, "enabling" that bridges the gap between governance and the classroom. By restricting tools to a secure, known and trusted ecosystem (Google Workspace), the school managed to mitigate privacy risks while fostering a unified direction. Furthermore, the effectiveness in approach of combining the use of Google tools and targeted professional development had been proven in the 2025 whitepaper, *AI works: 2025 research report* (Google, 2025), following a similar type of intervention being undertaken in schools in the United Kingdom. In conclusion, this project illustrates that while Generative AI adds a significant layer of complexity to the educational environment, it also offers an opportunity to grow teacher capability. When supported by collaborative coaching and a focus on relationship-based learning (Tuakana Teina), educators can move from apprehension to empowerment. As Generative Artificial Intelligence becomes a permanent fixture in education, coaching and professional development remain vital tools for ensuring that technology serves the needs of both teachers and learners.

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About the Author

Jeremy Ferguson is an educator with a passion for harnessing digital tools to positively impact teaching and learning, through coaching and professional development. Formerly at Kōwhai Intermediate School, where he was a Teacher and later Digital Technologies Specialist and a Curriculum Director, he is now teaching at Takapuna Normal Intermediate School as a STEAM Specialist Teacher and Leader of Digital Technology, continuing to advocate for the ethical and innovative use of technology in teaching and learning.





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Master of Contemporary Education C16P Cohort

Symposium 15 July 2026

Maintaining and Sustaining the Heritage language

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O lau gagana, o lou fa'asinomaga.

Your language, your identity

This action research project focused on implementing a personalised learning approach to develop learners' engagement in maintaining and sustaining the heritage language, Gagana Samoa, among Year 4 learners at Finlayson Park School. The project was developed in response to the growing concern surrounding the decline of heritage language use among younger generations and the need to strengthen learners' connection to their language, identity, and culture within bilingual educational settings. Heritage language plays an important role in preserving cultural identity, communication, and a sense of belonging among learners and their communities (Carreira & Kagan, 2018). Therefore, creating learning opportunities that acknowledge learners' interests, strengths, needs, and cultural experiences became an important

focus of this project.

The purpose of the project was to implement and evaluate a personalised learning approach that supported learners in maintaining and sustaining Gagana Samoa. Several goals were established to support the implementation of the project. These goals included developing collaborative planning and personalised teaching practices, collecting and reflecting on data during implementation, increasing learners' behavioural engagement, participation, confidence, and learning experiences across the curriculum, strengthening the use of Gagana Samoa among Year 4 learners, and building meaningful partnerships with families while sharing effective teaching practices and learning outcomes with school leadership and language unit leaders.

Action research was used as the methodology for this project. The project followed the four-stage spiral cycle of planning, acting, observing, and reflecting. At the same time, the theoretical approach guiding the project was personalised learning. Personalised learning emphasises learner voice, interests, strengths, needs, and active participation in learning, which can positively support learner engagement and ownership of learning (Major et al., 2021). The project was implemented over three iterations, with each iteration lasting six weeks. Throughout implementation, the action research spiral cycle and the personalised learning process worked concurrently and complemented each other. Both approaches emphasised the importance of planning, putting learning into action, observing learners' experiences, reflecting on progress, and identifying future directions for improvement.

The planning stage of the action research cycle aligned closely with the input process of personalised learning. This stage provided opportunities for learners to critically think about and plan aspects of learning that were meaningful and important to them. The acting and observing stages worked together with the process stage of personalised learning, allowing learners to engage in planned learning experiences while simultaneously reflecting on and observing their own learning behaviours and participation. The reflection stage aligned with the output stage of personalised learning, where both learners and the researcher evaluated learning outcomes and identified areas that needed

further attention in relation to maintaining and sustaining Gagana Samoa.

During implementation, it became evident that personalised learning supported learners differently according to their individual needs and circumstances. For example, some participants initially struggled to identify their interests or select appropriate interest groups. Through observation, it became clear that factors such as task practicality, pace of learning, family influence, learning environment, and language barriers affected learners' behavioural engagement. However, the repeated process of planning, acting, observing, and reflecting helped re-engage learners and encouraged them to participate more positively over time. The flexibility of both the action research cycle and personalised learning process allowed the project to move backwards and forwards depending on learners' engagement, participation, and progress.

Three methods of data collection were used throughout the project: talanoa sessions, observations, and a survey. Four talanoa sessions were conducted with parents and participants. These sessions provided opportunities to gather meaningful qualitative data related to the use of Gagana Samoa at home, family support for heritage language maintenance, and daily practices that influenced language sustainability. Talanoa sessions with participants also provided insights into learners' emotions, interests, confidence, doubts, and motivations throughout the project. One survey was conducted during the third iteration to collect final quantitative data regarding learners' experiences and perceptions of the project. Participants answered "yes" or "no" questions related to behavioural engagement, collaboration, family involvement, and language learning experiences. Observations were conducted continuously throughout the implementation process, focusing specifically on learners' behavioural engagement during learning activities.

The findings of the project highlighted several important themes. One significant finding was the influence of fixed and growth mindsets on learners' behavioural engagement. Some participants demonstrated strong motivation, perseverance, participation, and confidence from the beginning of the project, while others were initially reluctant to engage. However, over time, many

reluctant learners became more active participants. The findings suggested that learners' attitudes towards heritage language learning were strongly influenced by family beliefs, encouragement, and home language practices.

Another important finding was the significance of exposure to community and cultural activities. Learners who actively participated in Samoan church communities demonstrated stronger engagement, confidence, and leadership throughout the project. Community involvement appeared to strengthen learners' identity, sense of belonging, and confidence in using Gagana Samoa. Similarly, digital technology emerged as a valuable support for personalised learning. The integration of digital learning opportunities positively influenced behavioural engagement, allowing learners to become more self-directed, reflective, and motivated during activities. Major et al. (2021) argued that digital technology can support personalised learning by adapting learning experiences according to learner needs, interests, and pace.

Mutual trust also became a significant factor during the implementation of the project. Trust developed between learners, families, peers, and the teacher throughout the learning journey. This trust supported respectful collaboration, peer encouragement, confidence, and willingness to participate. Learners became more comfortable expressing themselves, sharing ideas, and supporting one another during learning experiences.

The survey findings reflected highly positive responses towards the project. Most participants shared that Gagana Samoa was important to them and that they enjoyed speaking and communicating in the language. All participants responded positively towards the personalised learning activities and appreciated having their interests acknowledged within the learning process. Learners also demonstrated positive attitudes towards collaboration and group learning experiences. In addition, most participants believed they could continue improving and maintaining their Gagana Samoa in the future, suggesting that the project strengthened learners' confidence and vision for heritage language sustainability.

Several new understandings and changes in practice emerged from the

project. The implementation of action research strengthened understanding of the significance of reflective practice and continuous improvement. Learning about personalised learning also influenced understanding of how to better support second-language and heritage-language learners within bilingual settings. The project deepened appreciation of Gagana Samoa as a recognised and valued language within New Zealand and reinforced the importance of maintaining and sustaining it for future generations.

The project also challenged assumptions regarding family influence on heritage language learning. Although family support was important, the findings showed that other factors also influenced learners' willingness to engage with Gagana Samoa. As a result, future teaching practice will involve greater exploration of behavioural, emotional, and cognitive engagement to better understand and support learners' needs. In addition, thematic analysis became a valuable tool for understanding qualitative data and generating meaningful themes from learners' experiences and behaviours.

Overall, this project demonstrated that personalised learning can positively support learners' behavioural engagement in maintaining and sustaining Gagana Samoa. The project highlighted the importance of culturally responsive teaching, collaboration, reflection, family involvement, and learner-centred approaches in supporting heritage language learning. The findings contribute valuable insights for teachers, bilingual units, school leaders, and researchers interested in strengthening heritage language education within culturally diverse educational settings.

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About the Author

Toloai E. Filipo is a senior leader in the Samoan Bilingual Unit at Finlayson Park School. Born, raised, and educated in Samoa, she developed a strong grounding in Samoan culture, language, and identity before migrating to Aotearoa New Zealand at the age of twenty-one. She continued her tertiary education in New Zealand and later entered the teaching profession, with her first teaching role situated within the Samoan Bilingual Unit. Throughout her career, Filipo has been deeply motivated by the ongoing challenges she has observed in the maintenance of heritage languages among Pacific learners living in diaspora. Her professional experience has cultivated enduring questions about how Samoan language, knowledge, and identity can be sustained in contemporary New Zealand contexts, where cultural and linguistic shifts often create barriers to intergenerational language transmission. A strong advocate for the preservation, maintenance, and revitalisation of Gagana Samoa, Filipo views heritage language education as an urgent and essential priority for schools. Her work is guided by a commitment to ensuring that Samoan learners see their language as valued, powerful, and central to their educational success and cultural wellbeing.



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Master of Contemporary Education International 2025 Cohort

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Phenomenon-Based Approach as a Pathway to Future-Focused Education

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Ka mua, ka muri.

The past guides the future.

Education in Aotearoa New Zealand increasingly emphasizes future-focused learning, with a focus on developing critical thinking, collaboration, and the ability to apply knowledge in authentic contexts (Bolstad, 2011). However, many classrooms continue to rely on teacher-directed instruction, discrete subject teaching, and tasks that prioritise correct answers over inquiry. As a result, a results-driven, memorisation-focused approach to education is increasingly inadequate for preparing learners for a rapidly changing and complex world. This project explored whether Phenomenon-Based Learning (PhenoBL), an interdisciplinary, student-centred approach to learning through real-world phenomena, could better support the development of these future-focused competencies in a Year 5 classroom.

The study was guided by three research questions, focusing on how PhenoBL improves students' critical thinking, its impact on students' interest in real-world learning contexts, and the extent to which PhenoBL develops collaboration and inquiry skills more effectively than traditional teaching. These questions were informed by literature emphasizing the need to shift from content transmission towards authentic, inquiry-driven, and future-focused learning experiences (Bolstad, 2011; Symeonidis & Schwarz, 2016).

A mixed-methods case study was undertaken in two Year 5 classrooms at a New Zealand primary school. Eight lessons were observed, including four PhenoBL lessons and four traditional lessons for comparison. Non-participant observation was adopted throughout the project. The two classroom teachers independently designed and taught all lessons, with no changes made to their usual practice.

Data were collected through structured classroom observations, semi-structured teacher interviews, observation notes, and student work samples. Observation checklists rated student learning across five domains: critical thinking, engagement and real-world relevance, collaboration and inquiry, teaching approach, and culturally responsive and future-focused learning. Qualitative data were analysed using Braun and Clarke's (2006) six-phase reflexive thematic analysis, while quantitative observation scores were summarised using descriptive statistics and interpreted alongside qualitative findings. Triangulation across observations, interviews, and student work enhanced the credibility and trustworthiness of the findings (Cohen et al., 2018).

The findings consistently demonstrated that PhenoBL created richer and more cognitively demanding learning experiences than traditional instruction. Students showed substantially stronger critical thinking, with PhenoBL lessons averaging between 3.37 and 4.75 out of 5, compared with 1.25 to 1.50 in traditional lessons. This was evident in their use of scientific tools and evidence to construct and justify their reasoning during authentic learning tasks.

Student engagement was also significantly higher during PhenoBL settings.

Learning reflected the behavioural, emotional, and cognitive dimensions of engagement identified by Fredricks et al. (2004), whereas traditional lessons were primarily characterised by behavioural compliance. Students demonstrated sustained focus, curiosity, and independent questioning during authentic investigations.

Collaboration and inquiry skills were more visible in PhenoBL contexts. Students negotiated roles, shared ideas, solved problems collectively, and co-constructed knowledge, whereas traditional lessons offered limited opportunities for meaningful peer interaction or student-led dialogue. A further theme indicated that PhenoBL embedded culturally responsive and future-focused learning through connections to kaitiakitanga, environmental stewardship, and cultural food traditions within authentic learning contexts.

Overall, findings align with existing research indicating that inquiry-based and interdisciplinary approaches more effectively develop future-focused competencies than traditional content-driven models (Bolstad, 2011; Symeonidis & Schwarz, 2016). Importantly, this study demonstrates that such pedagogical approaches can be implemented effectively within a typical Year 5 classroom in Aotearoa New Zealand without requiring systemic curriculum redesign.

This study contributes situated, classroom-based evidence of Phenomenon-Based Learning in a New Zealand context, extending predominantly theoretical and international scholarship. It demonstrates PhenoBL's potential to strengthen critical thinking, engagement, collaboration, and culturally responsive practice through authentic learning experiences aligned with national curriculum priorities (Ministry of Education, 2015). The findings are relevant to teachers, school leaders, and curriculum designers seeking to implement inquiry-driven pedagogies that better prepare learners for complexity in contemporary and future contexts.

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About the Author

Chathuri Gamalath is a learner support professional and Teacher Aide based in Tāmaki Makaurau Auckland, with over 13 years of experience in education across Sri Lanka Aotearoa New Zealand. She holds a Bachelor of Information Technology from the University of Colombo and is an Attorney-at-Law of the Supreme Court of Sri Lanka. She completed a Master of Contemporary Education at academyEX | The Mind Lab.



She previously served as Head Teacher of Information Technology at Kottawa North Dharmapala College in Sri Lanka, where she led digital learning initiatives and promoted student-centred teaching practices. She chaired the school's Five-Year Strategic Planning Committee and contributed to multiple leadership and governance functions, including student enrolments, student support services, interview panels, health promotion initiatives, and procurement decision-making.

Her professional interests include inclusive education, learner support, future-focused pedagogy, and culturally responsive practice. She aspires to contribute to secondary or tertiary education through inclusive, evidence-informed teaching, learner support, educational leadership, and educational innovation



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Master of Contemporary Education International 2025 Cohort

Symposium 20 July 2026

Teaching Strategies that Influence the Handwriting Development of Year 2 Students

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I orea te tuatara ka patu ki waho

A problem is solved by continuing to find solutions.

I am a primary teacher who worked in Asian Grammar School for many years in Sri Lanka. Through my teaching experience, I recognised that handwriting is a fundamental skill that supports students' confidence and future literacy development. However, I also observed that many learners required additional support to develop accurate letter formation and handwriting fluency. This project was undertaken in a Year 2 classroom in New Zealand to investigate the teaching practices that most effectively support handwriting development. The project aimed to examine how explicit modelling, guided practice, fine-motor preparation, purposeful teacher feedback, and student agency contribute to improving handwriting skills. The goals of the project were to identify effective evidence-informed teaching strategies, explore the influence

of student agency and teacher feedback on handwriting development, and generate practical recommendations to use in Year 2 handwriting lessons.

This project was conducted using a mixed-methods case study approach in a Year 2 classroom in New Zealand. This methodology enabled me to explore handwriting development within a real classroom context by collecting both qualitative and quantitative data (Creswell and Plano Clark 2011, as cited in Delaney et al., 2017). During the implementation stage, I observed handwriting lessons to examine the teaching strategies used to support handwriting development, student agency, and teacher feedback practices. The classroom teacher implemented evidence-informed strategies, including fine-motor preparation, explicit modelling of letter formation, guided practice, goal setting, self- and peer-assessment, and purposeful verbal feedback. My role as the researcher was to observe classroom practice using a structured observation schedule, record reflective field notes, conduct interviews, and collect handwriting samples. The Year 2 students actively participated in handwriting lessons and interviews, while the classroom teacher, literacy lead teacher, principal, and parents supported the implementation of the project through collaboration and ethical participation.

Data were collected using a mixed-methods approach to provide a comprehensive understanding of Year 2 handwriting development. Qualitative data were gathered through three classroom observations, semi-structured interviews with the classroom teacher, literacy lead teacher, and eight selected students, together with reflective journal entries. Quantitative data were collected by analysing handwriting samples from the focus group to identify changes in letter formation, spacing, alignment, pencil grip, and writing fluency. Qualitative data were analysed using thematic analysis to identify common themes, while quantitative data were analysed using descriptive statistics to measure patterns of improvement across the selected handwriting indicators.

The findings demonstrated that handwriting development in Year 2 is strengthened when explicit teaching strategies are combined with fine-motor preparation, purposeful teacher feedback, and opportunities for student agency. Classroom observations, interviews, and handwriting sample analysis

consistently showed improvements in learners' letter formation, spacing, pencil grip, writing fluency, confidence, and engagement. Students responded positively to clear modelling, guided practice, self- and peer-assessment, and timely teacher feedback, while teachers highlighted the value of creating opportunities for learners to take responsibility for their own progress. These findings support Vygotsky's sociocultural theory, which emphasizes the importance of teacher guidance and scaffolded learning, (Vygotsky, 1978, as cited in Allahyar & Nazari, 2012) and Bandura's Social Learning Theory, which highlights learning through modelling and observation (Bandura, 1977, as cited in Koutroubas & Galanakis, 2022). Overall, the project confirmed that handwriting is more effectively developed through a learner-centred approach that intentionally combines evidence-informed teaching strategies with supportive learning relationships, consistent with the literature reviewed.

This project has significantly strengthened my understanding of handwriting instruction by demonstrating that effective handwriting development extends beyond letter formation to include intentional teaching, learner agency, and meaningful teacher feedback. It has influenced my own professional practice by encouraging me to adopt more learner-centred approaches that actively involve students in goal setting, self-evaluation, and reflection. Although the project was conducted within one Year 2 classroom, the findings were positively received by the classroom teacher and literacy lead teacher, reinforcing the value of evidence-informed handwriting instruction and collaborative professional practice. More broadly, this project has the potential to support teachers, school leaders, and early childhood educators by providing practical strategies that can be adapted to different educational contexts. I also intend to share the findings with colleagues in my former school in Sri Lanka through professional learning discussions and online meetings, encouraging the use of learner-centred handwriting practices that strengthen young learners' confidence, engagement, and early literacy development.

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About the Author

Thushani Gawasinghe is an experienced primary school teacher from Sri Lanka. She holds a Master of Education from the UCAM (Spain) & IBES (France). She is currently completing a Master of Contemporary Education at academyEX in New Zealand. Her professional interests include early literacy, learner-centred teaching, and supporting young learners to become confident and independent. She is passionate about applying evidence-informed teaching practices to improve educational outcomes and hopes to share the findings of this research with educators in both New Zealand and Sri Lanka.





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Master of Contemporary Education International 2025 Cohort

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Exploring the Integration of Visual Arts and Cultural Design in Primary Science Learning

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Mā te huruhuru ka rere te manu.

Adorn the bird with feathers so it can fly.

This project was implemented in a New Zealand primary school across Years 1–6, within increasingly diverse classroom contexts. I sought to explore how visual arts and cultural design were integrated into primary science education and how these approaches influenced student engagement, understanding of scientific concepts, and culturally responsive teaching (CRT). Despite the growing emphasis on connected learning and CRT, there was limited understanding of how visual arts and cultural design were enacted within primary science across different year levels in New Zealand classrooms. The purpose of this project was to address this gap by examining how teachers integrated these approaches into science learning. The project aimed to (1)

explore the extent of visual arts and cultural design integration in primary science, (2) examine how this integration supported student engagement and learning, and (3) understand teachers' experiences of implementation, including opportunities and challenges in practice. These aims were aligned through a shared focus on strengthening inclusive and culturally responsive science teaching practices.

To achieve these aims, I adopted a case study approach across junior (Years 1–2), middle (Years 3–4), and senior (Years 5–6) classrooms to explore how visual arts and cultural design were integrated into primary science learning within a New Zealand primary school context. I conducted classroom observations and documented teaching practices across the three year levels to gain an in-depth understanding of classroom implementation. Participants included classroom teachers who delivered science lessons incorporating visual arts strategies such as drawing, labelling, model-making, oral discussion, questioning, and visual representation of scientific ideas. In addition, teachers integrated Māori vocabulary and connections to students' lived experiences to support culturally responsive and inclusive learning practices (Bishop et al., 2007).

Similarly, teachers engaged students in hands-on, collaborative, and creative learning activities that enabled them to represent scientific concepts in multiple ways. Across year levels, teaching approaches gradually shifted from structured, teacher-led instruction in junior classrooms to more collaborative, student-directed learning in senior classrooms, reflecting the progressive development of learner independence (Vygotsky, 1978).

To examine these practices, I used a mixed methods approach that involved collecting and analysing qualitative and quantitative data (Moeller & Creswell, 2016). Data sources included teacher and student surveys, classroom observation checklists, a focus group interview with teachers, and document and artefact analysis. Teacher surveys captured perspectives across all year levels, while student surveys using a smiley-face scale gathered students' perceptions of learning science through visual arts and cultural knowledge. Furthermore, semi-structured focus group interviews provided insights into

teacher experiences, teaching choices, and implementation challenges, while classroom observations focused on instructional strategies and student engagement patterns.

Data analysis involved both thematic and descriptive approaches. Qualitative data from interviews, observations, and artefacts were coded to identify recurring themes across datasets, while quantitative survey data were analysed using descriptive statistics. Findings from each source were then compared across year levels to build a comprehensive understanding of integration practices in primary science education.

The findings suggested that intentional integration of visual arts into everyday science teaching supported student engagement and conceptual understanding. Strategies such as teacher modelling, questioning, hands-on activities, and visual representation were found to be particularly effective in strengthening students' understanding of scientific ideas, aligning with the project's aim of exploring how visual arts integration supported learning. A clear developmental pattern also emerged across year levels, with more structured, teacher-directed approaches in junior classrooms and increasingly collaborative and independent learning in senior classrooms, reflecting differentiated pedagogical needs across stages of development (Vygotsky, 1978).

In relation to CRT, Māori language, cultural knowledge, and connections to students' experiences were evident in classroom practice; however, opportunities for students to actively contribute their own cultural knowledge were limited. This indicated that while elements of CRT were evident in classroom practice, further opportunities existed to strengthen student voice and cultural inclusion, as highlighted in the literature (Ladson-Billings, 1995).

Building on classroom practice, this project contributes new knowledge by demonstrating how visual arts can be meaningfully integrated into primary science education to enhance student interest, understanding, and CRT. It highlights the importance of intentional planning, step-by-step guidance, and teacher adaptability in supporting diverse learners, while demonstrating that

integrated approaches are most effective when embedded consistently within classroom practices rather than treated as isolated activities. However, the project identifies practical constraints such as time pressures, curriculum demands, and variability in implementation, which can influence the consistency of practice across classrooms.

From my own perspective, the project has strengthened my understanding of the value of integrated, student-centred learning and CRT in primary science. It has influenced my future practice by encouraging more purposeful integration of visual arts as a means of supporting learning, engagement, and student agency. The findings have been shared with the participating school through a recommendation guide and provide valuable insights for educators and school leaders by offering practical and flexible strategies to support ongoing professional reflection and discussion. Overall, the project reinforces the importance of culturally responsive and integrated teaching approaches and contributes to wider professional conversations in New Zealand education about equity, engagement, and deeper learning in primary science.

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Maleesha Godamanna is an international student in the Master of Contemporary Education programme with over five years of experience as a Sri Lankan government school teacher, teaching science in bilingual education settings. She has a strong professional interest in integrating creative approaches into teaching and learning, particularly to enhance student engagement, understanding, and inclusive classroom practice.





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Master of Contemporary Education Cohort C11P

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Enhancing Primary Science Education through the Integration of Mātauranga Māori: A Kaupapa Māori Approach

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Ko Nuhiti te maunga

Ko Motu-o-roī te moutere

Ko Hawai te awa

Ko Hinetamatea te marae

Ko Ngati Wakarara me Ngati Hau te hapu

Ko Ngati Porou me Te Aitanga a Hauiti te iwi

Ko Mihi Hannah ahau

Tihei mauri ora!

This project responds to the need to reimagine science education in Aotearoa New Zealand so that ākonga are equipped to thrive in a rapidly transforming world. Increasingly complex global challenges—such as climate

change, ecological degradation, and social inequity—require approaches to education that move beyond narrow, reductionist models of science. This project argues that mātauranga Māori, as an Indigenous knowledge system grounded in relationality, intergenerational wisdom, and place-based understanding, offers a powerful and necessary lens through which science education can be reframed. When positioned alongside Western science, mātauranga Māori not only enriches conceptual understanding but also fosters ethical, culturally responsive, and sustainability-oriented thinking (Black & Tylianakis, 2024; Hikuroa et al., 2011; Mercier, 2018).

At its core, this project explores the scope of how mātauranga Māori can lift science education by repositioning learners as connected participants within ecological systems rather than detached observers. This aligns with calls for integrative knowledge approaches that honour multiple epistemologies and support more holistic and adaptive responses to contemporary challenges (Barnhardt, 2005; Durie, 2004; Mbembe, 2023). The literature highlights that the interface between science and mātauranga Māori is not about assimilation but about respectful coexistence, often conceptualised through metaphors such as “two-eyed seeing” or braided knowledge systems (Hatcher et al., 2009; Martel et al., 2022). These approaches enable learners to draw on the strengths of both knowledge systems, fostering deeper understanding and critical thinking.

The key deliverable of this project is the Purerehua Model, a school-wide, interdisciplinary framework designed to embed mātauranga Māori as a lens for science teaching and learning. Inspired by the centrifugal and cyclical nature of knowledge described by Durie (2004), as well as models such as the Educultural Wheel, the Purerehua represents learning as dynamic, interconnected, and expanding outward from a central core. This model addresses a persistent challenge in primary education—the “crowded curriculum”—by demonstrating how science can act as a unifying context through which other learning areas are meaningfully integrated.

Implementation of the Purerehua Model is structured through four interconnected parts, ensuring coherence from whole-school vision to

classroom practice.

Part 1: Local Curriculum and Community Engagement establishes the foundational conditions for success. Grounded in kaupapa Māori principles, this phase prioritises whanaungatanga and meaningful engagement with iwi and hapū to ensure that local knowledge, histories, and values are authentically represented (Macfarlane & Macfarlane, 2019; Smith, 2012). Place-based education is central, recognising that learning is inseparable from the cultural, environmental, and historical contexts in which it occurs (Yemini et al., 2025; Wāhi: place-based education, 2025). This phase ensures that mātauranga Māori is not treated as an add-on but as a foundational framework guiding curriculum design.

Part 2: The Purerehua Framework (Key Deliverable) operationalises this vision through an eight-wedge model encompassing learning styles, mātauranga Māori, place-based learning, bodies of knowledge, science, and the integration of mathematics, literacy, and the arts. Each wedge is scaffolded across year levels, reflecting cognitive development and enabling cumulative learning. For example, early learners engage in exploration and observation, while older students progress toward investigation and problem-solving. This progression aligns with research emphasising the importance of developing enduring scientific competencies such as curiosity, evidence-based reasoning, and systems thinking (Hipkins et al., 2022). The model ensures that learning remains holistic, interconnected, and grounded in real-world contexts.

Part 3: Pedagogical Integration focuses on how teaching and learning occur within the model. Mātauranga Māori is enacted through practices such as storytelling, observation of environmental indicators (tohu), engagement with maramataka, and participation in kaitiakitanga. These approaches emphasise experiential, relational, and values-based learning, aligning with Indigenous pedagogies that prioritise doing, being, and belonging (Mead, 2003; Royal, 2009). Science learning is reframed as a process of inquiry and sense-making, rather than a collection of discrete facts, enabling students to integrate multiple ways of knowing (Gasparatou, 2017). The inclusion of disciplines such as mathematics, literacy, and the arts further strengthens this integration,

demonstrating how knowledge is constructed across domains.

Part 4: Leadership and Implementation recognises that sustainable change requires coherent and context-responsive leadership. The project advocates for an integrated leadership approach combining transformational, distributed, and adaptive leadership. Transformational leadership provides the vision and moral purpose necessary to inspire change, particularly in advancing equity and honouring Indigenous knowledge systems (Broughton & McBreen, 2015). Distributed leadership ensures that responsibility and expertise are shared across the school community, fostering collaboration and collective ownership (Spillane, 2005). Adaptive leadership supports iterative cycles of inquiry, enabling educators to respond to complexity and refine practice over time (Timperley et al., 2014). Together, these approaches create the conditions for meaningful and sustained pedagogical transformation.

The significance of this project lies in its potential to shift science education from a fragmented and often decontextualised subject to a coherent, culturally grounded, and future-focused learning experience. By embedding mātauranga Māori within science education, the Purerehua Model supports ākonga to develop not only scientific knowledge but also a sense of identity, belonging, and responsibility to the world around them. This aligns with broader calls for education systems that prepare learners to navigate uncertainty, think critically, and act ethically in relation to complex global issues (Mbembe, 2023).

In conclusion, this project demonstrates that mātauranga Māori has the capacity to significantly lift science education by providing a holistic, relational, and place-based framework for learning. Through the implementation of the Purerehua Model, schools are offered a practical and coherent pathway to enact this vision. The integration of Indigenous and Western knowledge systems, supported by strong leadership and community engagement, enables a transformation that is not only pedagogical but also epistemological - redefining what counts as knowledge and how it is valued in education. Ultimately, this work offers a hopeful and actionable response to the challenge of preparing ākonga for a transforming world.

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Mihi Hannah is Syndicate Leader and Classroom Teacher at Te Kura o Waiteata Gisborne Central School. Previous roles include Professional Learning Development Facilitator for House of Science NZ, online teaching with Te Aho o Te Kura Pounamu, and Primary and Intermediate teaching roles. Science education has always been a passion and has led to roles as Science and EnviroSchools Curriculum Lead, House of Science Manager for Te Tairāwhiti, and involvement with the Te Tairāwhiti Science and Technology Fair.





academyEX Executive Summary

Master of Contemporary Education C16P Cohort

Symposium 15 July 2026

The impact of AI-supported tools on teacher workload and student engagement in Writing

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This project, *The impact of AI-supported tools on teacher workload and student engagement in writing*, explored how generative artificial intelligence could be used within a Year 4 primary classroom to address two ongoing challenges: high teacher workload and inconsistent student engagement in writing. The purpose of the project was to investigate whether AI-supported tools could reduce the time demands associated with planning and feedback while also enhancing students' engagement with the writing process, particularly through their interaction with feedback.

The project was guided by three key goals: to reduce teacher workload related to planning and feedback, to increase student engagement in writing with the intention of improving outcomes, and to develop informed recommendations for the implementation of AI tools and policy within a school context. Using an action research approach, the project was conducted over three iterative cycles of planning, acting, observing, and reflecting. This

allowed for ongoing refinement of practice in response to emerging data. Data was collected through a combination of teacher time logs, surveys, classroom observations, student voice (including hui), and analysis of student writing samples.

Initial findings highlighted several challenges within existing practice. Teacher workload was significantly impacted by the time required to plan lessons and provide individualised feedback, often resulting in delays and a focus on surface-level features of writing. Students demonstrated variable engagement, with many viewing writing as a completed task rather than an iterative process. Feedback was largely teacher-directed, and students showed limited ability to interpret and apply feedback independently. This revealed an underlying gap in feedback literacy, which had not been previously identified as a barrier to writing improvement.

The introduction of AI-supported tools in subsequent cycles led to notable shifts in both teacher practice and student engagement. Teacher workload reduced significantly, particularly in relation to feedback and planning. While initial efficiency gains were moderated by the time required to develop effective prompting strategies, overall workload decreased as familiarity increased, reflecting wider findings that early setup can offset but not negate long-term time savings (Machado et al., 2025). The time required to generate feedback decreased, while the volume, consistency, and timeliness of feedback increased. As teachers developed greater confidence in using AI tools, this enabled a shift away from administrative tasks toward more meaningful instructional interactions with students.

Student engagement increased, particularly in relation to interacting with feedback and revising writing. Across multiple data sources, there was a consistent shift toward greater willingness to engage with feedback in order to improve writing. Students began to move beyond a focus on surface features, such as punctuation and handwriting, and engage more deeply with ideas, detail, and description. This aligns with research suggesting that students value the immediacy and accessibility of AI-generated feedback, while also demonstrating varied preferences between AI and human feedback sources

(Escalante et al., 2023). However, this increase in engagement was not consistent across all students and did not lead to full independence, with much of the engagement concentrated in the revision stage rather than initial writing motivation.

A key conclusion of the project was the identification of feedback literacy as a critical factor influencing the effectiveness of both teacher and AI-generated feedback. While students were able to access and respond to feedback more readily, many required ongoing teacher support to interpret and apply it effectively. Misunderstandings and inconsistent application of feedback highlighted the need for explicit teaching and scaffolding in this area. This reflects wider research which indicates that while AI can enhance the immediacy of feedback, teacher guidance remains essential for supporting students to make meaningful use of it (Evmenova et al., 2024). Over time, some students demonstrated increased awareness of effective feedback, including requesting more specific and detailed guidance, but the development of feedback literacy remained an area for continued focus.

The findings also indicate that AI-supported tools are most effective when used as part of a blended feedback model. Both students and teachers valued the immediacy and detail of AI-generated feedback, but continued to rely on teacher input for clarification, prioritisation, and deeper understanding. This reinforces the importance of the teacher's role in guiding learning. Rather than replacing the teacher, AI functioned as a tool that enhanced teacher effectiveness by enabling more timely and consistent feedback while allowing teachers to focus on higher-level instructional interactions.

The integration of AI tools contributed to a shift in classroom dynamics and teacher roles. Teachers moved from primarily generating feedback to supporting students in interpreting and acting on it. This repositioned feedback as a shared responsibility between teacher, student, and tool, and enabled more responsive and targeted teaching. In addition, AI-supported feedback processes improved access to feedback, reducing reliance on teacher availability and supporting more equitable participation in the feedback cycle.

While the findings demonstrate clear benefits in terms of workload reduction and increased engagement with feedback, measurable improvements in writing achievement were not systematically assessed within the timeframe of this project. The study was limited by its small sample size, single-classroom context, and constraints related to time and device access. Furthermore, while AI appeared to reduce the influence of prior teacher knowledge on judgement of student work, it is acknowledged that AI systems may introduce different forms of bias, requiring ongoing critical evaluation.

The insights gained from this project highlight the potential of AI-supported tools to improve the efficiency, consistency, and accessibility of feedback in writing instruction. However, they also emphasise that the effectiveness of these tools depends on teacher capability, the quality of prompting, and the development of both teacher and student AI literacy. Professional learning is essential to support teachers in using AI tools effectively and critically, and to ensure that students are able to engage meaningfully with the feedback they receive.

This project is significant for practice as it demonstrates that AI can support teachers in managing increasing workload demands while also reshaping feedback practices in ways that promote greater student engagement. It highlights the importance of maintaining a human-centred approach, where AI is used to enhance rather than replace effective teaching. The identification of feedback literacy as a key area for development provides a clear direction for future practice and research. Overall, this project offers a practical and contextually grounded example of how AI can be integrated into primary education in a way that supports both teachers and learners while remaining responsive to the evolving demands of the classroom.

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About the Author

Jodi Hill is an experienced classroom teacher who is passionate about supporting her students to make shifts in their learning. Jodi enjoys learning about innovations in education that can be harnessed to support teaching and learning and has been an early adopter of technology.





academyEX Executive Summary

Master of Contemporary Education International 2025 Cohort

Symposium 20th July 2026

Culturally Responsive Use of Digital Tools

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This project explored how digital tools were used in culturally responsive ways to support student engagement and learning in a Year 8 classroom in Aotearoa New Zealand. The research was undertaken because digital technologies have become an essential part of contemporary education; however, technology alone does not automatically create meaningful or inclusive learning experiences. The project explored whether digital tools recognised and valued students' cultural identities, experiences, and prior knowledge while supporting engagement in learning. Although previous research has demonstrated the value of both culturally responsive pedagogy and digital learning, there is limited classroom-based evidence explaining how these two areas are integrated in everyday teaching practice, particularly within New Zealand intermediate schools. Therefore, the purpose of this project was to investigate whether digital tools were being used in culturally responsive ways and how these practices influenced student engagement and participation. The overall goal was to generate practical knowledge to support more inclusive and culturally meaningful digital learning environments.

The study was guided by one main research question: How are digital tools being used in a culturally responsive way in a co-educational, urban Auckland Year 8 classroom, and how do these practices influence student participation? To answer this question, the project also explored whether digital tools recognised students' cultural identities and experiences, how students viewed culturally responsive digital learning, whether these practices influenced engagement, and the opportunities and challenges teachers experienced when implementing culturally responsive digital pedagogy.

A qualitative case study methodology, supported by a small amount of quantitative data, was adopted. Data were collected through three classroom observations, a semi-structured interview with the classroom teacher, a student focus group involving seven students, and a survey completed by twenty-nine Year 8 students. Using multiple methods enabled triangulation and strengthened the credibility of the findings through comparison of evidence from different sources (Yin, 2018). The data were analysed using thematic analysis (Braun & Clarke, 2006), producing four themes that addressed the research questions.

The findings showed that digital tools were strongly integrated into everyday classroom practice and formed a routine part of teaching and learning. Students regularly used Chromebooks and digital platforms such as Google Classroom, Canva, Minecraft Education, and Google applications across different curriculum areas. Digital tools also supported student engagement by encouraging collaboration, creativity, and active participation. Most students reported positive experiences and believed digital tools helped them understand lessons more effectively. However, engagement also depended on how teachers selected and used digital tools. While most students enjoyed digital learning, some preferred more traditional approaches, demonstrating that digital technologies do not engage every learner equally.

The most significant finding was that digital tools were not inherently culturally responsive. Instead, culturally responsive digital learning depended on intentional teacher design. Digital tools became meaningful when learning activities deliberately connected with students' cultural identities, experiences, and perspectives through relationship building, student choice, collaboration,

and opportunities for cultural sharing. Activities involving family histories, cultural research, and collaborative digital projects demonstrated stronger evidence of culturally responsive practice than technology-focused activities. However, culturally responsive practices were not evident in all digital learning activities. Some students felt cultural representation could be broader and more balanced, suggesting that culturally responsive teaching extends beyond including cultural content and requires meaningful student voice, equitable participation, and ongoing teacher reflection.

The findings both supported and extended existing literature. Consistent with Gay (2018), the project confirmed that culturally responsive teaching depends on recognising students' cultural knowledge, experiences, and identities. The findings also supported Hattie's (2012) argument that technology alone does not improve learning outcomes and aligned with the TPACK framework (Koehler & Mishra, 2009), which highlights the importance of integrating technological, pedagogical, and content knowledge. The study also demonstrated the value of student voice, as focus group discussions revealed perspectives that classroom observations alone could not identify.

The project was limited to one Year 8 classroom with one teacher in a single school and included only three classroom observations over a relatively short period. Consequently, the findings represent one educational context and cannot be generalised to all New Zealand schools. Future research involving multiple schools, more teachers, and longer observation periods would provide broader insights into culturally responsive digital teaching across diverse educational settings.

Overall, this project strengthened my understanding of culturally responsive pedagogy, digital learning, and educational research. It reinforced that meaningful digital learning depends not on technology itself but on intentional pedagogical decisions that recognise and value students' cultural identities and lived experiences. I hope these findings will support teachers, school leaders, and researchers in creating culturally meaningful digital learning environments. As an outcome of this project, I developed a professional resource for intermediate schoolteachers that provides practical strategies for integrating

culturally responsive approaches into digital learning while encouraging student voice and equitable participation.

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About the Author

Durga Kalijayakumar completed her Master of Contemporary Education at academyEX, New Zealand. She has more than ten years of teaching experience in secondary education in Sri Lanka, where she taught Business Studies and Economics under the Pearson Edexcel curriculum. Her professional interests include culturally responsive pedagogy, digital learning, educational equity, and inclusive teaching practices. Through this research, she aims to support educators in designing culturally meaningful digital learning environments that recognise and value the diverse identities of all learners.





academy EX Executive Summary

Master of Contemporary Education International 2025 Cohort

Symposium 15 July 2026

Digital Transformation in Curriculum Development for Global Readiness

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Mā te huruhuru, ka rere te manu.

Adorn the bird with feathers so it can fly

Digital technologies are increasingly present in New Zealand classrooms, yet research suggests they are often used for low-level tasks such as copying answers or completing online exercises, rather than to support deeper learning and genuine student ownership (Bolstad, 2012). This gap between the potential of digital tools and how they are used in practice raised a significant question: how might blended learning be designed more intentionally to build student agency? This project examined how a blended learning approach could foster the development of student agency in a co-educational, urban Auckland Year 8 classroom, a critical transitional stage preceding secondary school, where students are expected to assume greater responsibility for their own learning (OECD, 2019).

The project was guided by three research questions: how a blended learning approach supports the development of student agency in a Year 8 classroom; to what extent different teaching strategies (in-person and online) impact the effective delivery of a blended learning approach; and to what extent blended learning impacts teacher pedagogy. These questions were informed by literature that emphasises the importance of student agency as the capacity to set goals, make decisions, and take responsibility for learning (OECD, 2019), and by frameworks such as the substitution, augmentation, modification, and redefinition (SAMR) model (Puentedura, 2014), which distinguishes between technology that substitutes traditional tasks and technology that meaningfully transforms learning. Three aligned goals were set: to investigate how blended learning strategies supported student agency, to build collaborative partnerships with the teacher and students to design data collection tools, and to collect and analyse multi-source data to build a detailed understanding of agency within this specific classroom context.

A small-scale, mixed-methods case study design was adopted (Yin, 2018), conducted over six months in a Year 8 mathematics classroom at a New Zealand intermediate school. After obtaining principal permission, parent and teacher consent, and conducting two preliminary classroom visits, four structured classroom observations were conducted, each focused on a different mathematics topic and supported by digital tools including Canva, Mathletics, Kahoot, and Google Docs. The researcher acted as a non-participant observer throughout, recording evidence across blended learning integration, student agency behaviours, student engagement, and cultural responsiveness. A semi-structured teacher interview, surveys administered to the teacher and five participating students, and a researcher's reflective journal complemented the observation data.

Quantitative survey data were analysed using descriptive statistics to identify patterns across participants. Qualitative data from the observations, interview, and reflective journal were analysed using Braun and Clarke's (2006) six-phase thematic analysis, guided by the OECD (2019) Learning Compass and the SAMR model (Puentedura, 2014), and interpreted through socio-

cultural and culturally responsive frameworks. Triangulation across multiple data sources strengthened the credibility and trustworthiness of the findings by allowing evidence to be compared across different methods and perspectives (Creswell & Creswell, 2017).

The findings demonstrated that blended learning supported student agency within this classroom. Student survey data showed strong agreement across indicators of choice, ownership, and responsibility, and observation data confirmed that students became progressively more confident in selecting learning activities and working through challenges independently. Thematic analysis identified five themes: digital collaboration, facilitation over direct instruction, scaffolding for student agency, culturally responsive practice, and flexible pacing for learner needs, reflecting a progressive shift in both student independence and teacher practice. The teacher's consistent use of clues rather than direct answers aligned with Vygotsky's (1978) zone of proximal development. Culturally responsive practices, including te reo Māori greetings, students' home languages during peer collaboration, and real-life examples, were present throughout, though more evident in relational practices than curriculum content. These findings suggest that blended learning supports student agency most effectively when combined with intentional teaching strategies, appropriate scaffolding, and culturally responsive practice (Horn & Staker, 2014; Ryan & Deci, 2020).

This project provides situated, classroom-based evidence of blended learning in a Year 8 New Zealand context, extending research focused predominantly on secondary and tertiary settings (Graham & Halverson, 2022). The project demonstrated that meaningful blended learning requires purposeful pedagogical design rather than sophisticated technology (Hattie, 2012). The tools and approaches developed are adaptable by other educators, and findings will be shared through the academyEX Symposium and ongoing professional conversations.

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Kaushalya Kiriwaththuduwa is currently a student in the Master of Contemporary Education programme at academyEX | The Mind Lab in Tāmaki Makaurau, Auckland. She has over eight years of experience in education, spanning student services, administration, and classroom teaching, in both international and government school settings in Sri Lanka and Aotearoa New Zealand.



Her professional interests centre on blended learning, student agency, educational leadership, and collaborative practice, with a particular focus on how digital tools can be used to support meaningful, student-centred learning rather than simple task substitution. She is passionate about building inclusive learning environments and strengthening relationships between students, teachers, and families, and intends to apply the insights from this research to her future work in education in both New Zealand and her home country.



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Master of Contemporary Education 2025 Cohort

Symposium 15 July 2026

Rethinking Teacher Well-Being: A Relational and Contextual Practice

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Teacher well-being has become a priority in education because it impacts both teachers' professional lives and the learning environments they foster for students. While its significance is increasingly recognised, many approaches still emphasise individual strategies or external programmes that may not fully capture teachers' daily experiences or school-specific contexts (Day & Gu, 2014; McCallum et al., 2017). This project was conducted at a Waldorf primary school in Aotearoa, New Zealand, driven by my professional interest in understanding teacher well-being as a shared, relational, and context-dependent experience. Drawing from my experience as a teacher and educational practitioner, I aimed to work with teachers to explore how well-being is experienced in everyday school life and how collaborative inquiry could help develop meaningful, contextually relevant approaches to enhance their well-being. Instead of implementing a fixed well-being programme, the

project focused on creating spaces for teachers to reflect, share, and collaboratively examine practices suited to their professional contexts.

The project employed a Critical Participatory Action Research (CPAR) method, allowing participants to act as co-inquirers throughout the process (Kemmis et al., 2014). Five teachers engaged in three iterative inquiry cycles that integrated reflection, dialogue, creative activities, and collaborative exploration of teacher well-being. Instead of adhering to a fixed plan, the inquiry adapted based on participants' ideas, experiences, and priorities. Activities such as weather-metaphor reflections, battery-level check-ins, walking conversations, creative tasks, bring-and-share sessions, and shared staffroom reflections provided platforms for teachers to discuss the realities of their professional lives, identify well-being factors, and collaboratively find practical support strategies. My role was to facilitate participation, promote reflection, and support group decision-making, remaining attentive to participants' schedules, school duties, and the project's ongoing development. This flexible, participatory approach ensured the project stayed rooted in teachers' daily experiences and the school's specific context.

Information was generated throughout the inquiry through group dialogue, participant-generated artefacts, reflective activities, and researcher field notes. Rather than treating information generation and analysis as separate stages, analysis was integrated throughout each cycle of the inquiry. After each session, I examined researcher notes, participant reflections, and collaboratively produced artefacts to identify recurring ideas, experiences, and patterns. These were then compared and refined through ongoing reflection and discussion, resulting in three interconnected themes. This iterative process kept participants' perspectives central to interpreting the findings, allowing new insights to develop gradually. The collaborative approach also enhanced the credibility of the findings by allowing participants to influence both the process and the interpretation of their shared experiences.

The inquiry revealed that teacher well-being was experienced as a relational and context-dependent phenomenon rather than solely an individual duty. Participants consistently highlighted workload, emotional strain, classroom

tasks, and the difficulty of balancing professional and personal boundaries as key factors affecting their well-being. They also stressed the importance of collegial relationships, informal chats, and opportunities for connection beyond formal professional settings. As the inquiry developed, participants moved from pinpointing challenges to collaboratively identifying practical ways to support one another in their daily school environment. Instead of relying on external well-being programmes, they devised their own reflective practices tailored to their specific circumstances, priorities, and professional realities. These results align with previous research emphasising the importance of relationships and collaboration for teacher well-being (Day & Gu, 2014) and showcase how collaborative inquiry can help teachers collectively enhance their well-being and professional growth (Kemmis et al., 2014).

The project deepened my understanding of teacher well-being as a relational, collaborative, and context-dependent phenomenon, influenced by daily professional experiences rather than solely by individual responsibility. It also showed that collaborative inquiry can help teachers reflect on their experiences and develop practical, meaningful responses rooted in their school environments. These insights led to the creation of the Teacher Well-being Inquiry Framework and the related Context-Responsive Guidelines, which offer adaptable resources for other schools to explore teacher well-being through collaborative reflection and dialogue. More broadly, the project demonstrated that practitioner inquiry can generate locally relevant professional knowledge while fostering teacher learning, collegial relationships, and professional agency. Rather than separating research from practice, this inquiry revealed that working together to reflect, discuss, and address shared challenges can be a valuable way to improve teacher well-being. The project suggests that this approach could encourage other educators and schools to view teacher well-being not simply as an individual concern, but as something that can be developed collectively through ongoing collaboration, reflection, and shared professional learning.

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Suzana Krčmar is a Class 6 Teacher at Titirangi Rudolf Steiner School in Auckland. Before moving to Aotearoa New Zealand, she spent more than ten years working in Serbia in a school-based role that supported teachers, students, families, and school leaders, fostering collaboration and building connections that promoted learning and well-being. She completed a Master of Contemporary Education at academyEX, where her research explored teacher well-being through Critical Participatory Action Research (CPAR), collaborative inquiry, and reflective practice. Her professional interests include teacher well-being, relational pedagogy, inclusive education, practitioner inquiry, and context-responsive approaches to professional learning and school improvement.





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Master of Contemporary Education C16P Cohort

Symposium 15 July 2026

Impact of Technology on the Engagement and Achievement in Year 11 Science Internal Assessments in NCEA

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The integration of digital devices in the classroom does not automatically lead to improved learning outcomes. My research project aimed to explore the impact of integrating devices into Year 11 science assessments at a high school in West Auckland in New Zealand. This study investigated whether digital tools enhance student engagement and achievement, particularly for Māori, Pasifika and ESOL learners, who are often identified as priority groups within the New Zealand education system. With the increasing shift towards digital assessments within the NCEA framework by NZQA, there is a growing assumption that technology will naturally enhance learning outcomes. However, my observations in the classroom suggested that this may not always be the case. While students appeared more engaged when using devices, it was unclear whether this translated into deeper understanding or improved achievement. Therefore, the purpose of the project was to critically

examine whether digital device integration meaningfully improves learning outcomes, or whether it simply changes the way students complete and present their work.

This study also sought to examine how digital tools could be used to scaffold learning, reduce learning barriers, and create a more inclusive classroom environment. Particular attention was given to the ways in which digital devices support ESOL learners through visual and language-based tools and how they can support Māori and Pasifika learners through collaborative and relational learning approaches. These objectives aligned with national educational priorities, including the emphasis on digital literacy, equitable access, and culturally responsive teaching. This is further supported by the Ministry of Education's focus on digital literacy and NZQA's implementation of digital assessment standards.

To investigate this, I used an action research approach over a 9-week period and worked with two Year 11 science classes. There were 59 students in total for the sample size. I recognised early on that students needed to be explicitly taught how to use digital tools for learning, rather than assuming they already had these skills. Therefore, I designed a series of scaffolded practice tasks using platforms such as Google Docs, PhET simulations and [Exam.net](#). These tasks were used to build students' confidence, structure their thinking, and develop the digital skills required for assessment. I then implemented a redesigned digital assessment task, which was compared with a traditional paper-based task. Throughout the process, I adjusted the tasks based on student feedback and classroom observations, particularly when students reported distraction or difficulty managing tasks independently.

I collected both quantitative and qualitative data to gain a comprehensive understanding of the impact of digital integration. Quantitative data included assessment results, word counts, task completion rates, and time-on-task data from the [Exam.net](#) platform. Qualitative data were collected through student surveys, interviews with a focus on Māori, Pasifika and ESOL learners and classroom observations. I analysed the data by comparing trends between the paper-based and digital task and identifying common themes in student

experiences. This allowed me to move beyond surface-level results and understand how and why digital tools influenced learning.

The findings showed that digital devices increased student engagement, with many students reporting that tasks were easier, faster, and more enjoyable to complete. Morgan's (2008) study showed that technology enhances classroom engagement with interactive tools. Students were also more confident in editing and improving their work, which contributed to greater independence. However, a key finding was that increased engagement and output did not necessarily lead to improved scientific understanding or higher-order thinking. While students wrote more words, this did not always result in deeper analysis or evaluation. This indicates that technology alone does not improve learning outcomes; rather, the effectiveness of digital integration is dependent on task design, scaffolding, and teacher guidance.

Another important finding was the role of digital tools in supporting learners within their Zone of Proximal Development (Vygotsky, 1978). For example, SOL students used translation tools and visual supports to access complex scientific concepts, while structured templates helped students organise their thinking. However, without sufficient scaffolding, devices often led to distraction rather than learning. This reinforced the idea that digital tools are only effective when used with clear guidance and purpose. However, in alignment with Fukofuka and Ali (2022), the project also recognises that while digital tools can enhance collaborative learning in ways that reflect Māori and Pasifika values such as whanaungatanga and talanoa, this must be carefully balanced with the culturally significant practice of kanohi ki te kanohi (face-to-face interaction) to ensure that relational learning is not compromised. This highlights the need for digital integration to remain relational, rather than replacing culturally significant modes of interaction.

Niu and Niranjani (2025) addressed equity and the digital divide, and this project highlights that priority learners often face limited digital access. While some students benefited significantly from digital tools, others faced challenges due to limited access to devices at home or lower levels of digital literacy. This suggests that digital integration has the potential to widen

achievement gaps if not carefully managed. Additionally, concerns around authenticity, including the use of external sources or AI tools, posed challenges in ensuring that assessment results accurately reflected student understanding.

This project has significantly changed my teaching practice. Initially, I believed that simply introducing devices into assessments would improve learning outcomes. However, I now understand that effective digital integration requires intentional design, explicit teaching of digital skills and ongoing support. I shifted towards a more critical and reflective approach, where I focus on how and why technology is used, rather than just using it. I have also become more aware of the importance of equity and the need to ensure that all students are supported in digital learning environments.

The findings of this project have important implications for my own practice and the wider teaching community. They suggest that digital tools enhance student engagement and accessibility, their effectiveness depends on purposeful integration and strong pedagogical support. For schools, this highlights the need for structured professional development and consistent approaches to digital assessment design. At a systematic level, this research contributes to the ongoing discussion about digital learning in New Zealand by showing that technology does not automatically improve learning outcomes. Instead, it is the way in which teachers design, scaffold and implement learning experiences that determines their impact. Ultimately, this study reinforces that devices do not transform learning; it is the teacher's informed and deliberate use of them that makes the difference.

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Joshni Nand is a Science teacher at a high school in Auckland, New Zealand, with a deep passion for hands-on teaching and learning. Born and raised in Fiji, her love for education began at an early age, inspired by the children in her village and a community where education was deeply valued. Those early experiences shaped her belief that learning is not just about gaining knowledge, but about creating opportunities and building confidence.





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Master of Contemporary Education International 2025 Cohort

Symposium 20 July 2026

How teacher-student shared decision- making supports student agency

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This practice-based change project investigated how teacher–student shared decision-making supports student agency in a Year 5 classroom in a New Zealand primary school. Student agency is increasingly recognised as an important aspect of student-centred education because it enables learners to participate actively in their learning, make meaningful choices, and take responsibility for their learning (Vaughn, 2020; Organisation for Economic Co-operation and Development [OECD], 2019). Although shared decision-making is widely promoted within student-centred approaches (Stefanou et al., 2004; Cook-Sather, 2020), there is limited research examining how it supports student agency in New Zealand primary classrooms. The purpose of this project was to explore how shared decision-making influences students' participation, confidence, ownership of learning, and decision-making. The project aimed to provide practical insights that could support teachers in implementing classroom strategies that enhance student agency.

A mixed-methods case study design was used to investigate the research question. Data were collected from four Year 5 students and two teachers using six non-participant observations, semi-structured interviews, focus group interviews, and a five-item student questionnaire. Qualitative data were analysed using Braun and Clarke's (2006) thematic analysis, while questionnaire responses were analysed descriptively because of the small sample size. Triangulation of multiple data sources strengthened the credibility of the findings by comparing evidence across observations, interviews, and questionnaire responses (Harrison et al., 2017).

The findings showed that shared decision-making supported student agency by encouraging student voice, choice, collaboration, ownership, responsibility, and leadership. Teachers created opportunities for students to contribute ideas, choose learning activities, work collaboratively, and take leadership roles within classroom and environmental projects. These opportunities increased students' confidence, engagement, and willingness to participate in learning. Classroom observations demonstrated that students actively researched topics, selected materials, contributed ideas during planning discussions, and participated in collaborative environmental activities. Teacher interviews further highlighted the importance of providing leadership opportunities, classroom responsibilities, and supportive relationships that encouraged students to become independent learners. These findings are consistent with previous research demonstrating that autonomy-supportive teaching and shared decision-making strengthen students' engagement and ownership of learning (Stefanou et al., 2004; Cook-Sather, 2020).

However, the study also revealed that opportunities for meaningful participation were not consistent for all students. Questionnaire responses indicated that although all students enjoyed making decisions with others, most reported that their ideas were only sometimes used when classroom decisions were made and that they only sometimes had opportunities to choose learning activities. Observations also showed that some students remained quiet during discussions, suggesting that participation alone does not automatically result in student agency. Instead, students require genuine opportunities to influence

decisions, together with intentional teacher support that encourages every learner to participate. This finding supports previous research highlighting that authentic student voice depends on teachers sharing power and creating equitable opportunities for participation (Ladkin, 2017; Reid & Kawash, 2017).

The project created new knowledge by strengthening my understanding of the relationship between shared decision-making and student agency. Before undertaking this research, I believed that collaborative activities naturally supported student agency. However, the findings demonstrated that collaboration alone is insufficient unless students are genuinely able to influence decisions affecting their learning. This understanding aligns with Vaughn's (2020) dimensions of student agency, which emphasise students' confidence, responsibility, and collaborative decision-making, as well as the OECD Learning Compass 2030 (OECD, 2019), which recognises agency as learners' capacity to shape their own learning through meaningful participation. The project also demonstrated that teacher strategies play a critical role in creating learning environments where students' ideas are genuinely listened to, valued, and acted upon.

The findings contribute to existing knowledge by providing evidence of how shared decision-making supports student agency within a Year 5 classroom in a New Zealand primary school. While previous research has examined student agency more broadly (Mick, 2011; Cook-Sather, 2020; OECD, 2019), relatively little research has explored its relationship with shared decision-making in primary classrooms, particularly in the New Zealand context. This study shows that effective shared decision-making requires more than student participation; it requires teacher strategies that create authentic opportunities for students to influence classroom decisions while continuing to provide appropriate guidance and support. The study therefore reinforces the understanding that student agency is developed through collaborative partnerships between teachers and students rather than through complete student independence (Cook-Sather, 2020; Vaughn, 2020).

The project has practical value for teachers, school leaders, parents, and the wider education community. The findings provide practical strategies that

teachers can use to strengthen student voice, participation, leadership, and ownership of learning within student-centred classrooms. School leaders may also use the findings to support professional learning focused on shared decision-making and student agency. A practical toolkit was developed for the host school to support teachers in implementing these approaches. Although the small sample size limits the generalisability of the findings, the study provides valuable contextual insights that may inform future classroom practice and further research in primary education.

This project has significantly influenced my own professional practice. It strengthened my understanding of student-centred teaching and highlighted the importance of providing students with genuine opportunities to participate in classroom decision-making. In my future teaching practice, I intend to provide more opportunities for discussion, questioning, collaborative learning, and shared decision-making to strengthen students' confidence, responsibility, and agency. My teaching will continue to be guided by Vaughn's (2020) dimensions of student agency and the OECD Learning Compass 2030 (OECD, 2019), ensuring that students are not only involved in learning activities but are also able to influence decisions that affect their learning. I also recognise the importance of providing additional support for quieter or less confident students so that all learners can participate meaningfully.

The findings will be shared with the host school leaders and teachers to support their ongoing classroom practice. Although there are no current plans for wider dissemination, the project provides practical knowledge that may benefit other Year 5 teachers seeking to strengthen student agency through shared decision-making.

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Mirosha Pitigala is an international student in the Master of Contemporary Education at academyEX. She is an experienced Sri Lankan educator with 19 years of service as a government school teacher. Her professional interests include educational leadership, student agency, student-centred learning, and improving teaching and learning practices. Upon completing her studies, she aims to return to Sri Lanka as a lead teacher, where she can support high-quality teaching practices, promote student agency, and contribute to the implementation of government education policies.





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Master of Contemporary Education C16P Cohort

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Math² x Engagement + i(Memory) = Success

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Ehara taku toa, he takitahi, he toa takitini

My success should not be bestowed onto me alone, as it was not individual success but success of a collective

This Action Research project investigated the impact of cognitive breaks, gamified learning, blended learning, and retrieval-based memory tasks on Year 10 students' working memory and engagement within a mathematics classroom. The inquiry emerged from ongoing observations that students frequently experienced cognitive overload, mental fatigue, disengagement, and difficulties with recall and multi-step problem-solving during mathematics lessons. These challenges align with principles of Cognitive Load Theory, which suggest that working memory has a limited processing capacity during learning tasks (Sweller, 1988). The purpose of the project was to explore whether intentional instructional strategies could simultaneously improve

engagement and support the development of working memory within mathematics education.

The inquiry utilised an Action Research methodology through iterative cycles of planning, implementation, observation, and reflection (Kemmis et al., 2014). Quantitative and qualitative data were collected through pre-, mid-, and post-working memory assessments, student surveys, hui discussions, classroom observations, and reflective journaling. The intervention integrated structured cognitive breaks, retrieval-based memory tasks, blended learning approaches, and gamified learning activities through Blooket. Differentiated learning opportunities were also supported through the use of digital technologies and AI-supported learning tools.

Findings from the inquiry indicated that cognitive breaks positively supported students' ability to refocus, reduce mental fatigue, and sustain concentration during mathematics lessons. Hui discussions revealed recurring themes of improved concentration, clearer thinking, increased motivation, and stronger participation in classroom tasks. Students described cognitive breaks as helping them mentally "reset" and reducing feelings of a "jumbled brain." Gamified learning activities also increased participation, effort, and engagement, with students reporting that competition and collaboration encouraged them to persist with mathematical problem-solving tasks. These findings also aligned with motivational principles associated with student autonomy and engagement (Deci & Ryan, 2000).

The findings further suggested emerging improvements in working memory development. Students reported greater confidence in holding information, improved recall speed, and stronger ability to manage multi-step mathematical problems. However, the inquiry also identified that excessive retrieval tasks during cognitive breaks could contribute to cognitive overload and stress. As a result, subsequent iterations refined the intervention by streamlining memory tasks while maintaining high levels of engagement through gamified and blended learning approaches.

The project additionally reinforced the importance of culturally responsive and relational pedagogy. Student voice and co-construction were central components of the inquiry process and aligned with relationship-based approaches emphasised within Te Kotahitanga (Bishop & Berryman, 2006). Students were provided opportunities for choice, collaboration, and differentiated learning pathways, contributing to a more inclusive and responsive classroom environment.

Overall, the inquiry demonstrated that engagement and working memory development are interconnected processes that can be positively influenced through intentional instructional design. The findings suggest that cognitive regulation strategies, retrieval practice, explicit instruction, and gamified learning may collectively strengthen students' behavioural engagement, motivation, and emerging cognitive capacity within mathematics education. The inquiry additionally contributes context-specific practitioner evidence supporting the integration of relational pedagogy and cognitive learning strategies within secondary mathematics classrooms.

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Aron is a former Head of Faculty for Mathematics and is currently a secondary mathematics teacher currently undertaking a Master of Contemporary Education. His professional interests include working memory development, student engagement, culturally responsive pedagogy, blended learning, and the use of gamification within mathematics education. His



research focuses on how cognitive regulation strategies, retrieval practice, and student agency can support both engagement and achievement in secondary mathematics classrooms.



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Master of Contemporary Education C16P Cohort

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Collaboratively creating accelerated success for ESOL and Lower learners through AI

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Mā te kimi ka kite, Mā te kite ka mōhio, Mā te mōhio ka mārama.

Seek and discover. Discover and know. Know and become enlightened.

Teachers are pulled in multiple directions with a myriad of urgent needs. It is challenging to identify and meet the needs of learners who are well below the average, especially if those learners are at the foundation level in English. This has a detrimental impact on teacher workload and student success. As Mishu et al (2025) discuss, AI programs can assist learners by instantly responding to their individual input and providing increased engagement, re-leveling texts and translation assistance. The primary purpose of this project was to boost literacy and address learning apathy and low engagement among Year 8 ESOL (English for Speakers of Other Languages) and lower-level literacy learners. Observing that several students were not participating in class discussions, lessons or independent work, preferring to play or chat, a trend that was

starting to become contagious within the classroom environment. This study sought to use Artificial Intelligence (AI) to provide a personalised learning experience. By unravelling the core needs of these learners and comparing outcomes for students with and without language barriers, the project aimed to boost literacy skills so students could enter secondary school with the skills required for success.

A central goal of this project was to identify and address the core needs of lower-level literacy learners. By unravelling these complex barriers, the research aimed to compare the outcomes and success of various strategies for students with and without language barriers. The project positioned AI as a cornerstone to provide immediate, skills-based feedback, enabling students to make instant progress and improvements in their work that traditional methods might not facilitate as quickly. (Mishu et al., 2025)

Furthermore, the project aimed to develop a scalable literacy program that could be rolled out to all new arrivals at the school, regardless of their starting point. This was particularly important for international students who often arrive throughout the year into large classes with overloaded support systems. By boosting their literacy, the goal was to enable these students to engage effectively with inquiry-based learning, which is a major component of the International Baccalaureate curriculum at the school. Ultimately, the project sought to prepare students for the academic rigours of high school by ensuring they could successfully undertake complex lessons.

Finally, the aim was to identify how AI could supplement, rather than supplant, traditional teaching methods. A critical aspect of this goal was ensuring that any technological intervention was married with the building of whanaungatanga (relationships), as Bishop (2023) relates, no new learning can be undertaken without connection and a secure sense of belonging. The project aimed to use AI to resolve communication difficulties and provide non-confrontational feedback, thereby freeing teachers to focus on personal connections and high-quality instructional strategies. (Ministry of Education, 2006)

Utilising an action research model, the project followed a cyclical process of reflection, identification, and improvement. Action research was chosen because, as espoused by Moghaddem (2007), it focuses on solving specific problems through collaboration rather than merely proving a hypothesis. The iterations in the study can be grouped into three major aspects, with several minor iterations contained within.

As part of a research and selection iteration, an extensive range of AI programs - including Curipod, Brisk, Education Perfect and Google tools - were evaluated based on cost, ease of use, and reporting quality. This phase focused on eliminating programs that were poorly suited to the classroom setting or too advanced for the target learners.

The practical application phase involved 10-minute booster lessons during silent reading time, where students engaged with tools like Google Readaloud for fluency and Brisk for writing support. Students were also given longer lessons with the whole class on programs such as Curipod and Brisk, where they received AI feedback, had personalised AI tuition, and could go in and out of their native language. This phase also investigated the option of students using AI tools during ESOL lessons.

The iteration relating to integration and Inquiry focused on embedding AI tools into existing classroom tasks. This included using high-quality translation tools within Google Classroom to allow ESOL students to understand complex rubrics and success criteria for major inquiry projects. This had them taking part when they had said that they would not.

The project also involved working collaboratively with other teachers, the students themselves and whanau to review AI programs and literacy goals and to investigate and test ways that AI could be beneficial throughout the school. Whanau responded to a parent survey to align school efforts with family goals, which predominantly focused on comprehension and vocabulary development.

While no single AI program currently meets every literacy need, the removal of age restrictions on Google's Gemini suite allowed for the seamless

integration of translation and levelling tools that significantly boosted student engagement. Data showed profound upward movement in writing levels for the study group, with many students making more than a year's worth of progress. However, the study also found that AI cannot work in isolation; it must be partnered with strong teacher pedagogy to prevent students from using technology to circumvent deep learning. (Kong et al., 2024)

Several critical insights emerged regarding the intersection of technology and pedagogy. High-quality translation tools are transformative because they reduce the cognitive workload for ESOL students, allowing them to focus on high-level lesson outcomes rather than word-for-word decoding. This shift also served as a diagnostic breakthrough, as it became clearer to see which students were held back by language and which faced deeper learning barriers.

The research also highlighted that time is the enemy of innovation, as the heavily packed curriculum often squeezed out targeted interventions. Furthermore, the study reinforced that while AI feedback is valuable because it is non-confrontational, it lacks the motivational power of human *whanaungatanga*. Successful engagement required a balance: motivated students used AI to enhance their work while those prone to work avoidance sometimes used it as a shortcut. Finally, the project showed that leading attitudinal change among staff is essential for AI tools to move from being viewed with suspicion to being able to be utilised effectively. (Kong et al., 2024)

This study provides a useful framework for supporting diverse learners in a New Zealand context, where Auckland's demographics continue to shift. The project demonstrated that AI could bridge the gap for international students, allowing them to access the curriculum immediately, regardless of their English proficiency. For schools, the significance lies in using AI to reduce teacher workload and differentiate materials instantly, which creates more time for relationship building. Ultimately, the project established the skeleton of a program that ensures equity by providing foundation-level learners with the tools they need to succeed in a modern, AI-literate workforce.

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Master of Contemporary Education International 2025 Cohort

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Academic Language Development and ESOL ākonga Transition in Tertiary Education

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Mā te huruhuru ka rere te manu.

Adorn the bird with feathers so it can fly.

This research project investigated how the New Zealand Certificate in English Language (Level 3 – Applied) programme supports English for Speakers of Other Languages (ESOL) ākonga in developing the academic language competencies required for successful transition into mainstream tertiary education in New Zealand. I undertook this project in response to a persistent challenge in tertiary education: although many ESOL ākonga develop communicative competence for everyday interaction, they often continue to experience difficulties with the academic literacy demands of higher education, particularly in academic writing, critical reading, discipline-specific vocabulary/terminology, and critical thinking (Elder et al., 2007; Rahnuma,

2023; Scott et al., 2022). Despite the importance of academic language development for tertiary success, limited research has examined how ESOL programmes support this transition within authentic New Zealand tertiary classroom contexts.

The study aimed to identify effective teaching strategies that promote academic language development, examine how these strategies support ESOL ākonga during their transition into mainstream study, and explore the relationship between communicative competence and academic literacy. Guided by cultural intelligence, Funds of Knowledge theory, and academic language development frameworks, the study was underpinned by culturally responsive pedagogy, learner-centred teaching, and scaffolded learning approaches (Berryman et al., 2018; Edwards et al., 2020; Field & Ryan, 2022; Gay, 2010; Tajeddin et al., 2024). These theoretical perspectives recognise that successful transition depends not only on language proficiency but also on ākonga's cultural identities, prior knowledge, active participation, and opportunities to engage meaningfully in academic learning.

I adopted a mixed-methods case study design to develop a comprehensive understanding of ESOL ākonga transition experiences. Data were collected through online surveys involving ten volunteer ESOL ākonga and two lecturers, semi-structured interviews with lecturers, two classroom observations, a document analysis, and Talanoa conversations with five volunteer ākonga (Cohen et al., 2007; Vaioleti, 2006). Quantitative data were analysed using descriptive statistics to identify patterns in retrospective pre-post self-ratings collected through the online survey across pre- and post-programme measures, while qualitative data were analysed using Braun and Clarke's (2006, 2022) reflexive thematic analysis. Triangulating multiple data sources enabled me to examine ākonga experiences alongside classroom practice, strengthening the credibility and trustworthiness of the findings.

The findings demonstrated substantial improvements in communicative competence, particularly in speaking, listening, ākonga confidence, and

classroom participation. Classroom observations, online surveys, semi-structured interviews, and Talanoa conversations consistently showed that ākonga became more confident participating in collaborative learning activities and academic discussions. However, progress in academic writing, critical reading, discipline-specific vocabulary, and higher-order thinking developed more slowly. Although many participants perceived themselves to be prepared for tertiary study, my analysis revealed a consistent disparity between communicative competence and academic literacy, despite participants reporting increased confidence for tertiary study. Academic literacy had not progressed at the same pace as communicative competence.

One of the most significant contributions of this project is the identification of what I describe as the 'Transition Gap': the disparity between ākonga's communicative confidence and their readiness to meet the academic literacy demands of mainstream tertiary education. While communicative competence developed rapidly through interaction-rich, learner-centred classroom practices, academic literacy remained comparatively underdeveloped (Cummins, 2008; Hyland, 2022). These findings suggest that conversational fluency alone should not be interpreted as evidence of academic readiness and that successful transition requires the integrated development of linguistic, cognitive, and academic competencies.

Scaffolding emerged as one of the most influential teaching strategies supporting ākonga success. Modelling, guided writing, pre-teaching vocabulary, breaking complex tasks into manageable stages, collaborative learning, and formative feedback reduced anxiety and increased ākonga engagement with academic tasks. At the same time, I identified an important pedagogical tension. When scaffolding was not intentionally and progressively withdrawn, some ākonga became increasingly dependent on lecturer guidance and demonstrated reduced confidence when expected to complete unfamiliar academic tasks independently. These findings reinforce the importance of balancing instructional support with the gradual release of responsibility to foster ākonga autonomy.

Culturally responsive and learner-centred pedagogies also played a significant role in strengthening engagement, participation, belonging, and wellbeing. Recognising cultural identities and prior experiences of ākonga created inclusive learning environments in which ākonga felt respected and confident to contribute. However, I found that these approaches alone were insufficient to develop the academic literacy skills required for tertiary success. Rather than replacing explicit academic instruction, culturally responsive pedagogy was most effective when integrated with intentional teaching of academic writing, disciplinary literacy, and critical thinking.

Overall, this project demonstrates that successful ESOL transition is a multidimensional process involving academic literacy development, cultural adaptation, academic socialisation, and increasing ākonga independence. Three key insights emerged from the study.

- First, this transition involves academic socialisation and epistemic acculturation as well as academic language development (Hyland, 2022).
- Second, scaffolding effectively supports learning and the confidence of ākonga, but must be intentionally faded to develop their independence (Cummins, 2008; Vygotsky, 1978).
- Third, culturally responsive teaching enhances ākonga engagement and sense of belonging, but should be complemented by explicit academic literacy instruction to achieve equitable academic outcomes (Berryman et al., 2018; Gay, 2010).

This project provides practical implications for ESOL educators, programme designers, and institutional leaders seeking to strengthen tertiary transition pathways. The findings support curriculum design that intentionally integrates explicit academic literacy development with communicative language teaching, culturally responsive pedagogy, and scaffolded opportunities for developing ākonga independence. By identifying the 'Transition Gap', this study contributes a practical conceptual framework for understanding why communicative confidence does not necessarily translate into academic

readiness. These findings provide practical guidance for future ESOL programme design and professional practice, contributing to more equitable and academically successful transition pathways for multilingual ākonga in New Zealand tertiary education.

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Anjana Soorige is a tertiary educator at Toi Ohomai Institute of Technology, Tauranga, New Zealand. She has teaching experience across tertiary, primary, secondary, and early childhood education in New Zealand, Sri Lanka, and Poland. Her professional interests include ESOL, academic literacy, culturally responsive pedagogy, digital learning, and educational technology. She is committed to supporting multilingual ākonga and strengthening equitable transition

pathways into tertiary education. She plans to pursue advanced studies to expand her research and contribute to the advancement of ESOL, academic literacy, and multilingual ākonga success in tertiary education.





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Master of Contemporary Education C16P Cohort

Symposium 15 July 2026

Evaluating Generative AI Feedback Tools to Improve Writing Efficacy, Agency and Confidence for New Zealand Year 9 and 10 Students

Nica van Woerden

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He rangi tā matawhāiti, he rangi tā matawhanui.

The narrow eye sees a narrow horizon,

The broad eye sees a broad horizon.

The action research project, *"Evaluating Generative AI Feedback Tools to Improve Writing Efficacy, Agency and Confidence for New Zealand Year 9 and 10 Students,"* looked at the adaptive challenge of incorporating Generative AI (GenAI) tools into the class space to support students while they are working on writing tasks. The project was conducted as a practice-based inquiry at a special character school to see whether three AI tools, namely Brisk, Gemini and TrekAI, could support students to grow their confidence in writing instead of using AI content to substitute their work.

A main motivator was the unspoken use of AI where students hide their use of AI due to a wide, inconsistent range of teacher reactions. The decline in writing motivation and confidence is stated as a concern for teenage writers (Wright et al., 2021). Addressing the decline in writing motivation and confidence in adolescent students, this study envisages a school-wide framework to actively teach AI use is imperative to ensure that AI is not simply passively consumed but is used intentionally, ethically, and morally to grow knowledge and ability.

As the research got underway, school management required a pivot to 'hedged' tools to mitigate bias and for data safety. ChatGPT was omitted and replaced by TrekAI. Hedging is vital for integrity as well as the school's priority for scaffolding (guidance). This highlighted a major issue in the use of AI, where over-reliance can detrimentally affect neural growth and memory recall.

The project used a mixed methods, agile model with an adaptive leadership approach. We worked collaboratively as a community of practice through surveys, interviews, and talanoa discussions. The plan was to hear and see quantitative growth and qualitative data. Student voice drove iteration changes and pivots.

The project consisted of three separate iterations. Iteration One started with Brisk, which was used as post-writing feedback on a writing piece, for students to consider as a reflection before publishing. Iteration Two used Gemini, with student access throughout the task to support the writing process in real time. Iteration Three used TrekAI as a guidance-only tool. This was a scaffolding-only AI platform, made available throughout the task for students to access when they chose to for maximum agency.

Through differentiating between the student's own belief in their skills (Bandura, 1977) and their confidence in the AI tool, the research looked at how confidence and efficacy grew using these tools when time with the teacher is limited in a modern learning environment.

The study aligned with the literature that suggests a major part of skill development is instant feedback (Hattie & Timperley, 2007). Having timely

support reduces anxiety and the timing of the feedback connects to metacognition, where the student understands the 'why' behind the correction. Both lead to a better published piece.

However, the study showed that the AI tool must align with specific pedagogical goals. The student voice was loud and clear that substitution (AI generated content) leads to a decline in personal ability and efficacy. However, gains in efficacy take place when students are given a wider use of the AI tool for iterative development. The students shared that using ethical tools with guidance-only options felt successful in growing critical thinking skills. This research has demonstrated that GenAI tools can support writing confidence when used as scaffolding rather than substitution or content creation. This aligns with the Scaffolded AI Literacy (SAIL) framework (MacCallum et al., 2024), which emphasises that for AI to be effective, there needs to be a robust procedure or framework for teachers to use consistently at their school.

Student feedback also showed that integrating AI works best when integrated with whanaungatanga. Having strong teacher-student relationships allows robust discussions, open sharing of ideas and trust to allow trialling of tools. AI platforms become tools in the kete rather than teacher replacements. However, for this to be successful, teacher Professional Development (PLD) is essential for the classroom to have ethical and responsible AI use in play. It is the teacher's role to ensure that students are ready for a rapidly changing world and the students need to be contributors to the progress.

In conclusion, understanding responsible use of AI supports growing efficacy and confidence to produce high quality personal work while passive use is detrimental to learning. When GenAI is used in a planned, hedged environment and supported by an informed teacher through dialogue, students' writing efficacy, confidence and digital fluency improve. The tools become a collaborative scaffold that enhance and grow personal confidence and digital skills which they will need to navigate the future world for our rangitahi.

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About the Author

Nica van Woerden is an experienced teacher at Hamilton Christian School, where she has been since 1997. She has taught a variety of subjects, from Year 1 to 13, currently focusing on English and Humanities in Middle and Secondary schools. Nica holds a Postgraduate qualification in English Literacy and is currently completing her Master's in Contemporary Education. In addition, she has held the role of Kāhui Ako Across School Teacher for the past four years, focusing on fostering collaborative practice and digital literacy across the wider school community.



Nica's research is centred on AI Integration in the classroom. She aims to empower students as lifelong learners by using technology to create personalised and meaningful educational outcomes. Her work seeks to improve

teaching methods and writing confidence through digital tools, with a focus on raising critical thinking and rhetorical skills through purpose-based learning.

Nica draws on her experience in secondary education to keep her practice current and relevant through ongoing research and by connecting with educational technology leaders. She has led several exciting initiatives, including developing and delivering AI Professional Learning and Development (PLD) sessions for HCS staff, Kāhui Ako meetings and schools, and presenting her work on AI integration at a National NZACS Conference. Nica is motivated and committed to creating engaging and personalised learning experiences that prepare both staff and students for their future while also continuing her lifelong learner status



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Master of Contemporary Education International 2025 Cohort

Symposium 15 July 2026

Fostering Reading for Pleasure in a North Shore Primary School

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The purpose of this case study was to highlight the role of the school library in fostering reading for pleasure (RfP) in a North Shore primary school and to investigate how its temporary absence affected students' reading experiences, with the aim of identifying existing and new strategies to foster and strengthen a culture of RfP.

At the start of the project, the case study school's library no longer functioned as a traditional library, having been repurposed as a classroom due to growing student enrolments and later used by teaching staff during redevelopment. This local challenge reflects wider pressures on school libraries in Aotearoa New Zealand, where research on school libraries remains limited (McDowall et al., 2025), despite growing recognition of their role in fostering RfP (Loh et al., 2022). However, little is known about how schools can sustain key factors that support RfP, such as student autonomy, access to a

wide range of texts and meaningful social interactions around reading, when access to a dedicated library space is disrupted.

To address this gap, the study was guided by three research questions that explored the academic, emotional, and social benefits associated with RfP, the impact of the library's temporary absence on students' RfP, and the extent to which library resources and services changed within the case study school as a result of the closure.

Given the well-established contribution of RfP to children's literacy development, wellbeing, curiosity and lifelong learning (Collins et al., 2022; Kucirkova & Cremin, 2024), understanding how RfP can be sustained has important implications for educational practice.

A mixed methods case study approach was adopted (Clark et al., 2018), with He Awa Whiria serving as a complementary framework emphasising collaborative and reciprocal learning across diverse knowledge systems (Cram & Lyons, 2024). Data were collected through semi-structured interviews, observations, questionnaires, and a collaboratively designed Reading Snapshot Poster Challenge involving the school librarian, senior leaders, teachers, parents and students volunteering as library ambassadors. Qualitative data were analysed thematically, while descriptive statistics were used to analyse quantitative survey data. Together, these methods provided a rich understanding of both the impact of the library's temporary loss and the school's adaptive responses.

The analysis of qualitative data identified four interrelated themes. Participants consistently described RfP as a voluntary, autonomous and enjoyable activity, strongly associated with intrinsic motivation, wellbeing (e.g., feeling "calm," "happy" and "free"), and academic gains such as vocabulary development, fluency and comprehension. RfP was also seen to foster curiosity, empathy and social understanding, reflecting its contribution to children's broader academic, emotional and social development. However, survey responses showed differing perceptions of students' independent reading enjoyment between school and home contexts, with parents reporting

lower levels of engagement.

These experiences were closely connected to the role participants attributed to the school library. Rather than simply a place to borrow books, it was characterised as a multifunctional space serving as a sanctuary, community hub, and informal learning environment, aligning with place-based learning approaches (Smith, 2002). This environment fostered RfP alongside a sense of belonging, social interaction, and emotional regulation, particularly for students seeking calm or escape from busy school environments.

When this space became unavailable, participants described reduced access to books and fewer opportunities to browse a diverse range of reading materials, with borrowing becoming more administratively and logistically challenging due to the loss of a centralised system. Students relied more heavily on smaller classroom collections, limiting both range and choice. Participants also highlighted concerns about inequitable access, particularly for students with limited access to books at home, suggesting the temporary closure may have widened existing disparities in reading opportunities. Although impacts on reading engagement varied across students and contexts, the findings demonstrated how closely RfP was connected to the educational and social functions of the school library.

Despite these challenges, the school community adapted its library resources, spaces and reading support practices to maintain access to books and sustain a culture of reading. This included redistributing book collections across classrooms, creating alternative reading spaces, and expanding peer-supported reading initiatives involving library ambassadors and senior students working with younger students. Participants also described continued collaboration across the school community, with staff adapting practices "in slightly different ways" to ensure ongoing access to books, reading experiences and opportunities for choice.

Overall, I found that while school libraries remain highly valuable, sustaining RfP depends not only on preserving the physical space but also on maintaining equitable access, social connections, student agency and collaborative

practices that the library enables. Although the temporary closure disrupted many of these elements, it also revealed that a culture of reading can be sustained when responsibility is shared across the wider school community. Building on these insights, I created an evidence-informed booklet to provide practical recommendations for school leaders, librarians, teachers and whānau. Although developed from a single case study, the recommendations may assist other schools, with or without dedicated library spaces, seeking to strengthen RfP and demonstrate how collaborative leadership and adaptive practices can sustain valued educational outcomes despite changing circumstances.

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About the Author

Zsafia Verhas is a publishing professional with more than eight years' experience in children's book publishing. After working as Foreign Rights Manager at Hachette Children's Group in London, she moved to Aotearoa New Zealand, where she completed a Master of Contemporary Education at academyEX. Her research explored how schools can foster reading for pleasure, particularly in the absence of dedicated library spaces. She volunteers with The Friends of Storylines Ngā Pou o te Whare Waituhi Tamariki o Aotearoa, supporting New Zealand's children's literature community.





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Master of Contemporary Education International 2025 Cohort

Symposium 20 July 2026

Culturally Responsive Science Learning in Year 7/8 Classrooms

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This project emerged from concerns that traditional science teaching approaches do not always connect with the diverse cultural identities, experiences, and knowledge students bring to the classroom. Although cultural diversity can enrich learning, science education can sometimes privilege dominant Western perspectives and fail to connect with students' lived experiences, contributing to disengagement among diverse learners (Cobern & Loving, 2001; Gay, 2018; Wood et al., 2021). In Aotearoa New Zealand, culturally responsive science education emphasises building on students' cultural knowledge, languages, and everyday experiences to make science learning more meaningful (Glynn et al., 2010; Sexton, 2024). Drawing on my previous postgraduate study and professional interest in culturally responsive teaching (CRT), I undertook this practice-based research project at a culturally diverse urban co-educational intermediate school in Auckland, New Zealand.

This study aimed to explore the impact of culturally responsive teaching on Year 7/8 science engagement, how science lessons can be designed to strengthen culturally responsive learning opportunities, and how students experience culturally responsive science learning. It sought to evaluate existing practice and design, implement, and assess science lessons that promote more engaging, inclusive, and meaningful learning experiences.

The project was informed by culturally responsive pedagogy, which recognizes students' identities, experiences, and knowledge as valuable resources for learning (Gay, 2018; Ladson-Billings, 1995), and by inquiry-based science learning, which emphasizes active participation, collaboration, and the connection of scientific concepts with students' cultural knowledge and lived experiences (National Research Council, 2012; Glynn et al., 2010). It was further guided by the Kaupapa Māori principles of *manaakitanga*, *whanaungatanga*, and *ako*, which emphasize care, respectful relationships, reciprocal learning, and meaningful connections between students' cultural identities and classroom learning (Bishop et al., 2007).

The project used a mixed-methods case study design to examine CRT in a real-world educational setting (Yazan, 2015). The project was conducted over a 12-week period in collaboration with a Year 7/8 science teacher. Participants included Year 7/8 students from multiple classes representing Māori, Pacific, Pākehā, and Asian backgrounds, and their science teacher.

The process began with four classroom observations to identify existing teaching practices and student engagement levels. Following these observations, the classroom teacher and I collaboratively designed and implemented two culturally responsive science lessons on atoms and the periodic table. Guided by the Culturally Responsive Inquiry Design Model (CRIDM), the lessons incorporated *Te Reo Pūtaiao*, culturally significant materials such as *pounamu*, jade, and sapphires, periodic table name-building, flame test linked to cultural celebrations, sodium/water reaction, and opportunities for students to design their own elements enabling students to connect chemistry concepts with their everyday experiences through collaborative inquiry and practical investigations.

Data were collected using classroom observations, pre- and post-lesson student surveys, student semi-structured interviews, pre- and post-implementation teacher interviews, researcher reflections, and project artefacts. Using multiple sources of data strengthened the trustworthiness of the findings through triangulation (Yin, 2018). Qualitative data were analysed using thematic analysis (Creswell & Poth, 2018) , while quantitative survey data were analysed using descriptive statistics to identify changes in student perceptions and engagement.

Four interconnected themes emerged from the findings: creating a safe and respectful learning environment, building relationships and cultural connections, student-centred and responsive teaching, and engagement through active and scaffolded learning. The findings showed that culturally responsive teaching positively influenced student engagement by creating learning environments where students felt safe, respected, valued, and actively involved in learning. Practices reflecting the principles of *manaakitanga*, *whanaungatanga*, and *ako* supported students' sense of belonging and participation (Bishop et al., 2007; Ministry of Education, 2011).

The findings also highlighted the importance of intentionally designing science learning experiences that connect with students' cultural identities, languages, prior knowledge, and everyday experiences. Students valued opportunities to share their ideas, contribute cultural knowledge, use their home languages, and participate in collaborative learning. Practical investigations, inquiry-based activities, multimodal teaching strategies, and scaffolded instruction supported students' confidence, understanding, and engagement. Students particularly valued hands-on learning experiences and opportunities to work collaboratively with peers. Survey findings supported these observations, with students reporting increased interest, confidence, and engagement during the culturally responsive lessons.

The findings demonstrated that culturally responsive teaching is an ongoing process of reflection, adaptation, and relationship building rather than a fixed set of teaching strategies. The participating teacher's understanding and implementation of culturally responsive practices developed throughout the

intervention, reflecting movement towards more responsive and inclusive teaching practices (Evans, 2021). Although the short duration of the project limited opportunities for deeper implementation, the findings suggest that culturally responsive science teaching can make learning more meaningful, engaging, and equitable for diverse learners. These findings align with research on culturally responsive science education (Glynn et al., 2010; Sexton, 2024).

This study deepened my understanding of CRT and challenged some of my previous assumptions. Initially, I believed that CRT required explicit cultural connections in every lesson. However, through engaging with the literature, collaborating with the teacher, and analysing the findings, I developed a deeper understanding that culturally responsive practice exists along a continuum and that creating culturally safe, respectful, and student-centred learning environments is a critical first step (Evans, 2021). The project reinforced the importance of relationships, student voice, and recognizing students' identities and experiences as strengths rather than deficits (Gay, 2018).

It also strengthened my understanding that teachers do not need to share the same cultural backgrounds as their students to teach in culturally responsive ways. Instead, culturally responsive practice requires a willingness to learn about students, build positive relationships, maintain high expectations, and engage in ongoing reflection and professional learning (Bishop et al., 2007).

This research contributes to the growing body of knowledge on culturally responsive science education in Aotearoa New Zealand and provides practical examples of how culturally responsive approaches can be integrated into science teaching. The project outputs, including the CRIDM, culturally responsive lesson resources, and teacher reflection tools, may support educators seeking to create more inclusive, engaging, and equitable science learning environments.

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About the Author

Sharmila Visvanathan is currently a postgraduate student completing a Master of Contemporary Education at academy EX in Auckland. She has over 17 years of experience as a Chemistry teacher in Sri Lanka, where she built a strong foundation in science education and student-centred teaching. She is passionate about culturally responsive practice and creating inclusive learning environments where all students feel supported and able to succeed. Her teaching focuses on engaging students through meaningful, collaborative, and reflective learning experiences. Outside of her work and studies, she enjoys spending time with family and travelling around New Zealand.





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Master of Contemporary Education International 2025 Cohort

Symposium 20 July 2026

Exploring How Teachers Use Digital Tools in a Culturally Responsive Way

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He aha te mea nui o te ao? He tangata, he tangata, he tangata.

What is the most important thing in the world? It is people, it is people, it is people.

As a Master of Contemporary Education student and an emerging primary teacher, I undertook this project in a culturally diverse New Zealand primary school to explore how teachers intentionally designed and implemented digital learning to affirm students' cultural identities, languages, and lived experiences. My interest in this topic developed through my teaching experience in Sri Lanka, where cultural responsiveness often centred on celebrating festivals rather than embedding students' identities into everyday teaching and learning. Through my postgraduate study, I developed a deeper understanding of culturally responsive pedagogy and recognised the potential of digital technologies to create more inclusive and meaningful learning

experiences. Guided by culturally responsive pedagogy and relational approaches to teaching (Gay, 2018; Bishop & Berryman, 2006), I investigated how teachers implemented culturally responsive digital pedagogy, the factors influencing these practices, and their perceived impact on students' identity, belonging, and engagement.

A mixed-methods descriptive case study was undertaken in one New Zealand primary school involving three Year 7/8 teachers. Over four weeks, data were collected through six classroom observations, teacher interviews, student group and individual interviews, a teacher survey, planning documents, and digital artefacts. Classroom observations focused on naturally occurring teaching practices without intervention, enabling exploration of how digital technologies such as Google Docs, Google Slides, Canva, Smart Board, and Education Perfect were used within everyday learning. Qualitative data were analysed using thematic analysis, while survey data were analysed descriptively to identify patterns across participants. The analysis was informed by sociocultural theory, culturally responsive pedagogy, and the TPACK framework, which supported interpretation of the relationships between technology, pedagogy, and content knowledge (Mishra & Koehler, 2006).

The findings showed that teachers used digital technologies frequently across all observed classrooms; however, culturally responsive use of these technologies varied across learning areas. Cultural connections were strongest during literacy and inquiry learning, where teachers intentionally encouraged students to share their identities, family experiences, languages, and cultural knowledge. Across classroom observations, interviews, and survey findings, I found that students felt more engaged, confident, and included when digital learning activities reflected their cultures and lived experiences. In contrast, culturally responsive practices were less evident during mathematics lessons, suggesting that teachers found it more difficult to integrate students' cultural identities into procedural learning. These findings demonstrated that culturally responsive digital learning depended on intentional teacher planning and pedagogical decision-making rather than the use of digital technologies alone.

Teachers also identified practical challenges, including limited culturally

relevant digital resources, time constraints, and varying levels of confidence when planning culturally responsive digital learning. These findings highlighted the importance of ongoing professional learning and practical planning resources to strengthen culturally responsive digital practice across different curriculum areas. The project resulted in two practical resources: the Planning Culturally Responsive Digital Learning: A Quick Guide and the Culturally Responsive Digital Learning Planning Checklist, developed from both the literature and the findings of this study. These resources are intended to support teachers in planning, reflecting on, and strengthening culturally responsive digital learning.

Overall, this project strengthened my understanding that technology alone does not create meaningful learning. Instead, effective digital teaching depends on teachers intentionally integrating technology with pedagogy, students' cultural identities, and strong relational practices. Through this research, I developed as a reflective practitioner and researcher while contributing practical resources that may support more equitable and culturally responsive digital learning in New Zealand primary schools

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About the Author

Chamari Waduge is a Master of Contemporary Education student at academyEX with a background in primary education in Sri Lanka. Her professional interests include culturally responsive pedagogy, digital learning, and inclusive teaching practices. Through this project, she explored how digital technologies can support culturally responsive teaching in New Zealand primary schools and is committed to creating learning environments where every student's identity, language, and culture are recognised and valued.





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Master of Contemporary Education C16P Cohort

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Building collaboration around teaching practices - a blended model for strengthening teacher learning in Bridging Education

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This project explored how to increase collaboration around teaching practice among tertiary teachers in the Bridging Education department at Unitec, New Zealand, where informal collaboration and workplace learning already play a significant role. Bridging teachers support students who may not have succeeded at school or who are changing direction before entering programmes such as Nursing. These students often need skilled teaching, strong pastoral care, and flexible learning approaches. However, tertiary lecturers are commonly appointed for their subject or industry expertise (Beaty, 1998) and may receive limited ongoing support to develop as teachers, meaning that informal and collaborative learning opportunities are particularly important (Weddle, 2022).

The project therefore tested whether an online community built in Microsoft Teams could increase collaboration between tertiary teachers, based on

research into collaboration and online learning communities (Baker, 2015; Garrison et al., 2000; Griffiths et al., 2021; Poppelreuter & Bramble, 2023; Viskovic, 2005; Wenger, 1998).

The project had five practical goals: to support informal learning between colleagues, strengthen professional relationships and collaboration, improve teaching and learning through shared practice, build a stronger community of practice around teaching, and identify practical methods and barriers, including the role of the facilitator. The project used action research—a practical cycle of planning, acting, observing, and reflecting—over three eight-week iterations with nineteen Bridging Education lecturers as participants. Garrison's Community of Inquiry (CoI) framework (Garrison et al., 2000) was used to structure, design, and measure the online environment through iterative changes to teaching presence (facilitation), examining how this influenced collaboration through interactions (social and cognitive) in that space. Wenger's Communities of Practice (CoP) theory (Wenger, 1998) provided a theoretical basis for understanding how a collaborative community could be formed, and methods used to build effective CoPs (Poppelreuter & Bramble, 2023) were applied throughout the project. Due to the social and interactive nature of communities of practice, applying methods to build effective CoPs was considered a way to increase collaboration. Therefore, a blend of the two frameworks (Wenger's CoP and Garrison's CoI) was used.

Three Teams channels were created: AI and Technology, Teaching and Learning, and Professional Development. In each iteration, teaching presence (Garrison et al., 2000), or facilitation, was changed. During the first iteration, weekly posts and email summaries were used; the second added small online AI focus groups; and the third continued these methods and added weekly channel activities.

Evidence came from posts on the channels across the three eight-week iterations, two anonymous surveys, and eight Talanoa interviews, with Talanoa enabling open, relationship-based conversations about staff experiences using the channels (Vaioleti, 2006). Posts were coded using the Community of Inquiry framework as social presence, cognitive presence, or both (Garrison et

al., 2000). The AI channel received 76% of total posts, showing that staff engaged most with a specific, urgent problem connected to current practice (Poppelreuter & Bramble, 2023). Across all channels, 91% of posts included social presence, confirming that recognition, trust, and relationships supported participation (Griffiths et al., 2021). Participants were more likely to post if they already had relationships with the facilitator or others posting on the channel. Yet most exchanges were short reactions or affirmations and did not show the sustained dialogue, shared decision-making, or joint products associated with deeper collaboration (Baker, 2015). Therefore, in this context, a facilitated online space alone did not lead to true collaboration or support the building of relationships that did not already exist. Information from Talanoa and surveys showed this was often due to time constraints, the nature of teaching (where participants were not often at their desks), and the time and focus needed to compose written posts when many other priorities took precedence. Most survey respondents valued an online space, but the majority said it was not enough by itself, and informal face-to-face conversation remained the main form of collaboration.

Changing the facilitator's approach (teaching presence)—from weekly posts, to focus groups, to added activities—did not have any significant effect on the number or types of posts on the channels (Garrison et al., 2000). The systemic organisational environment and contextual factors were more influential (Beaty, 1998). Workload, strength of relationships, time allocation, physical distance, topic relevance, digital habits, and morale mattered more; These echoed wider findings on the conditions that support or constrain collaboration (Beaty, 1998).

Importantly, post numbers did not show the true amount of collaboration. Results from surveys indicated that facilitator posts on the channels and AI focus groups motivated participants to collaborate in their own tacit communities of practice (Viskovic, 2005). Participants often passively read posts without replying, spoke with colleagues, and developed resources within local teams, reflecting the often-invisible nature of informal learning and collaboration in tertiary contexts (Beaty, 1998; Viskovic, 2005). The online platform was therefore most useful as a connector, meeting place, and

organised resource hub—not as a complete community of practice (Wenger, 1998). It was found that increasing collaboration did not necessarily create explicit communities of practice; however, because of the collaborative nature of CoPs, using methods to build an effective community of practice encouraged collaboration.

This dataset shows that the most supportive environment for collaboration in Bridging Education is a blended model, which includes: first, an online platform as a flexible hub for sharing resources; secondly, small online focus groups to support deeper collaboration around specific topics such as AI; and thirdly, continued local, face-to-face conversations, which remain the main form of collaboration in the department.

The findings of this project show that organisational support is a foundational condition for collaboration (Weddle, 2022). Collaboration should be recognised as professional work rather than an optional extra, with protected workload time and shared meeting periods when all are free. New teachers would benefit from structured, sustained mentoring, peer observation, team teaching, and gradual movement into independent practice. Leadership should give value to staff experience and knowledge by inviting staff to set priorities and agendas, while social and celebratory activities can help create a safe, connected team that is more willing to share uncertainty, disagree constructively, and learn together.

For Bridging Education, this project provides practical ways to turn existing goodwill and informal networks into a stronger learning community where teachers feel supported in learning together, experimenting confidently, and creating better outcomes for their students.

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About the Author

Elaine Whitworth is a biology lecturer in the Bridging Education department at Unitec, NZ. Her role is to support students in transitioning into pathway degrees, including nursing, medical Imaging, and other health-related programs. Her professional interests are supporting teachers' professional learning and collaboration. She plays the bassoon in a community concert band.





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Putting the A in STEAM

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When I started this project, there was a thought in the back of my mind: Is the introduction of AI going to stop students from being divergent thinkers? How can we introduce divergent thinking through STEAM (Wahono et al., 2025) to help students develop skills such as collaboration, critical thinking, problem-solving, creativity, and curiosity? I thought there was an opportunity here to explore holistic, engaging, hands-on, integrated curriculum planning with a focus on the Arts in STEAM.

The A in STEAM can be defined in several contexts, including art/ aesthetics, contextual understanding, and creativity. Little did I know that New Zealand curriculum changes were being discussed, with a move away from integrated and inquiry based (Qablan et al., 2024) learning to siloed subject areas.

Taking my experiences of teaching Inquiry and STEM at a school that was forward thinking, breaking down siloed teaching and replacing it with a curriculum that was student interest-led and facilitated by teachers, I thought it

would be good to test the waters. I wanted to know what teachers thought about the integration of the Arts into STEAM, what that looks like, and how it has already been done. I was interested to see the perspective of teachers who had been in the profession for some time, and from teachers who were new to teaching.

I wanted to work with the Design Thinking Framework, which I have used so much in the past, and look at Creative Thinking tasks. I was also interested to see what the barriers were to teaching STEAM and wondered if some of that was a lack of creative thinking on the teacher's behalf.

As my job changed during the start of my master's, I moved from my original focus on students to how I might work with educators through a series of workshops held at conferences. I was able to run several workshops, and then went on to run full staff PLD at 2 schools. This PLD was not part of my research for this project, but I was able to shape the content around the insights gained from my project.

Some insights include the understanding of what each subject area of STEAM looks like through a variety of lenses (experienced and new teachers, technology teachers, secondary and primary teachers). Also, I started to look at the Design Thinking Framework and how this could be redesigned into a new model for a teaching association. Creative thinking tasks that I have done previously with students were introduced with varying degrees of engagement from teachers.

I felt that data collection methods needed to be true to my idea of creative thinking, and therefore, data were collected in a variety of different ways. Drawing, large pieces of paper, Google Forms, and chat bots were used, along with conversations during workshops with my participants.

Throughout my work, I could see new avenues for research and iterations on what I wanted to find out. More emphasis could have been put on different

cultural lenses of STEAM, pulling out creative, mathematical, and scientific concepts from other countries. I could have just worked through the Design Thinking Framework alone, as I only skimmed this. Creative Thinking tasks could have been the whole focus of my work; this was the most engaging part of my workshops, creating laughter and breaking down barriers with the teachers.

The information gathered from my project has impacted my work as both an educator and a facilitator. There is a need to be open minded, fluid with your thinking, and open to making changes to your planned work, taking into account the attendees' backgrounds, experiences, and strengths to help them work collaboratively in a team. There is the idea that we know what STEAM looks like, but after the data collection, I see that everyone's interpretation of this is different, and I believe the concept of the Arts being focal to this integrated learning is very important.

Moving forward, this research has moved my thinking, changed my perspective, and created an opportunity to move forward into new employment as an authentic leader who values creative thinking and collaboration.

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About the Author

Claire Wigley was working in the classroom as a Technology teacher, a workshop facilitator, and is now working as Director of Teacher Engagement at School Kit.

At the core of what Claire does is creativity and collaboration. From working to enrich students within the NZ school system, to now working at supporting teachers, creative thinking, STEAM, and a love of education is always present through the different roles she has held.





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The Impact of language proficiency on Mathematical problem solving among ESOL learners in New Zealand classroom

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This change project was a practice-based investigation into the relationship between language proficiency and the capacity of Year 8 English for Speakers of Other Languages (ESOL) learners to solve mathematical word problems in a New Zealand intermediate school. Despite the widely held view that mathematics is a universal subject, mathematical word problems involve the learner having to grasp the meaning of academic vocabulary, sentence structures and contextual meanings and then using the mathematical concepts. These language demands are problematic for many ESOL learners despite their good mathematical knowledge (Cummins, 2000). This project aimed to examine the language barriers which can influence ESOL learners, to discover successful instructional practices in mathematics classrooms, and to create some useful resources to help the learners feel confident and able to learn.

The project was guided by three objectives. To begin with, it examined the

particular language issues that Year 8 ESOL learners have in solving mathematical word problems. Second, it investigated the effects of these language barriers on the confidence and engagement of the learners in mathematics lessons. Lastly, it also examined effective teaching practices that could be used to serve multilingual students and utilised the results to create useful classroom materials to facilitate inclusive mathematics instruction. These goals were met by one central research question with three sub-questions that dealt with the problem of language, the level of confidence of the learners, and the practice of the teacher.

The qualitative case study approach was followed due to its ability to give a comprehensive explanation of the teaching and learning experiences in a real classroom environment. Classroom observations using semi-structured interviews with teachers and questionnaires filled in by ESOL learners were used to collect data. Observations in the classroom were made in terms of learner engagement, language usage, teacher support strategies and interactions during mathematics lessons. The teacher interviews were useful as they revealed some of the challenges that the teachers faced when working with multilingual learners, and the student questionnaires revealed the level of confidence, knowledge of mathematical vocabulary, and learning experiences. The data obtained by these various sources were analysed by thematic analysis and simple descriptive analysis, which made it possible to compare the findings with each other by triangulation and gain a deeper insight into the research issue.

The results showed that language proficiency had a great impact on solving mathematical word problems among learners. However, as much as most students could grasp mathematical concepts and calculations involving numbers, they usually failed to comprehend a situation where they encountered new vocabulary, complicated sentence construction, and contextual language applied in mathematical problems. Observations in the classroom revealed that students often reread questions, took time to answer them, or needed teacher assistance to comprehend the assignments. The interviews with the teachers ensured that these challenges were more related

to language and not mathematics skills. The responses obtained in the student questionnaires also revealed that a significant number of students were not very confident in solving mathematical word problems in written English.

The project was also able to identify several teaching strategies that were effective in supporting the ESOL learners. Visual scaffolding, simpler language, and collaboration, classroom discussions, and digital learning resources were regularly used by teachers to enhance learner understanding and engagement. Based on these results, a collection of teaching resources was created to help teachers build more inclusive mathematics classrooms with multilingual learners.

The project concluded that enhancing the use of language in the teaching of mathematics is critical in enhancing both student confidence in learning and student academic performance. Instead of explaining challenges in solving mathematical word problems as a sign of weaknesses in mathematics, educators must admit the strong role of academic language in the process of learning. The findings also highlighted the importance of adopting inclusive teaching approaches that acknowledge learners' linguistic and cultural backgrounds (Gay, 2021).

The completion of this project reinforced my knowledge about the connection between learning mathematics and language and improved my skills in carrying out classroom-based research. The experience cemented the importance of reflective practice, teacher collaboration, and evidence-based decision-making to solve educational issues. It has also impacted my future teaching because it has made me want to intentionally incorporate language support, visual learning strategies, culturally responsive practices, and formative assessment in mathematics teaching. The resources created in the course of this project can be of practical use to teachers who operate with multilingual students and can also help to enhance inclusive education practice in New Zealand schools.

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About the Author

L. Dilhani Wijethunge is completing a Master of Contemporary Education and has worked as an English-medium Mathematics teacher in Sri Lanka for more than 13 years. She has a strong interest in inclusive education, ESOL, culturally responsive pedagogy, and mathematics education. Her research focuses on supporting multilingual learners by identifying language-related barriers to mathematical learning and developing evidence-informed teaching strategies that promote confidence, engagement, and achievement. Through research and reflective practice, she is committed to creating inclusive, language-rich learning environments that enable all students to succeed in mathematics.

