



Te Poutāhū
Curriculum Centre

Literacy & Communication and Maths Strategy

The Common Practice Model

Phase 1: Principles and Pedagogical Approaches



**Te Tāhuhu o
te Mātauranga**
Ministry of Education

Te Kāwanatanga o Aotearoa
New Zealand Government

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Common Practice Model

Introduction

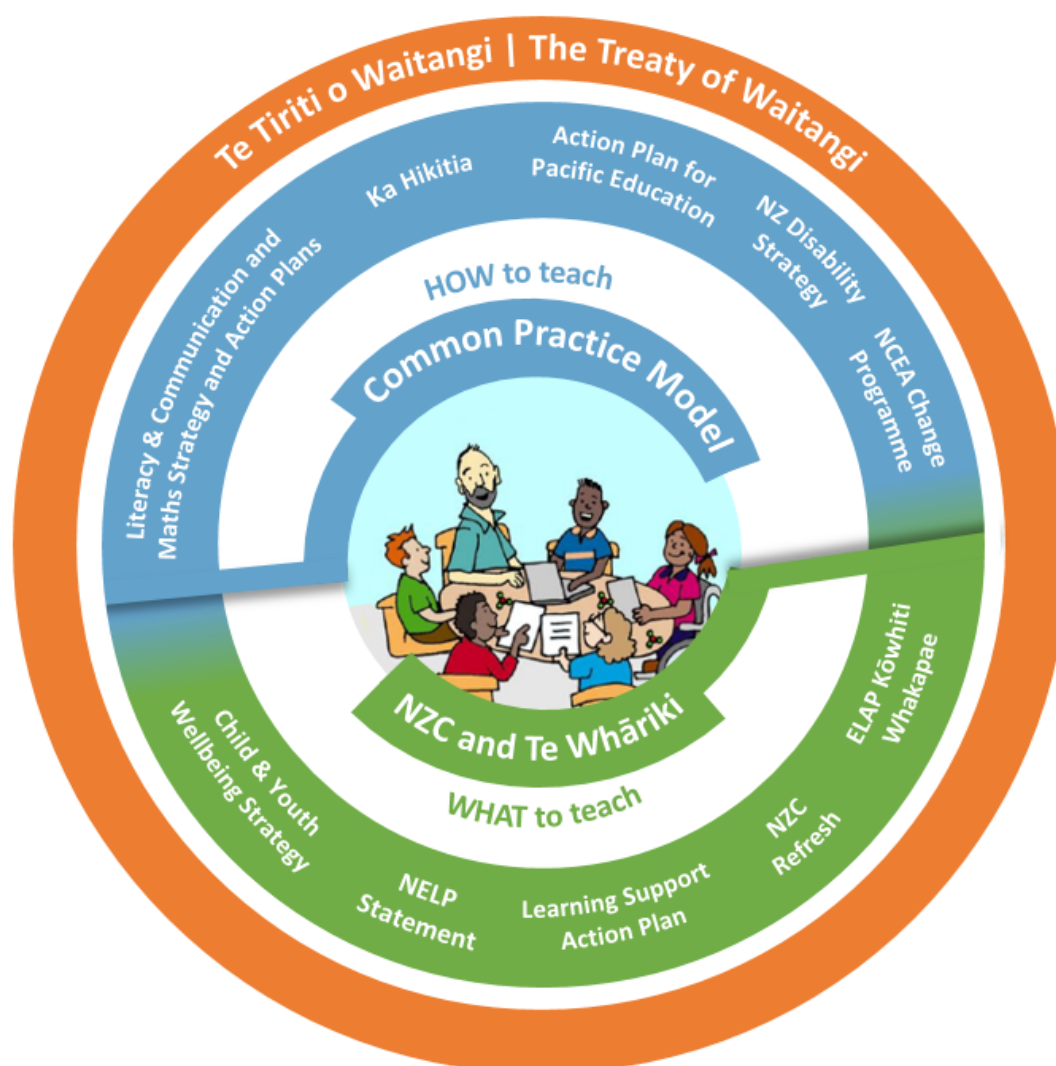
Literacy & Communication and Maths Strategy

Every child and young person in Aotearoa New Zealand needs to experience success in their learning and have their progress and achievements celebrated. The Literacy & Communication and Maths Strategy aims to address inequity by lifting educational achievement for all.

The Strategy and Action Plans enable the early learning and schooling system to deliver equity and excellence in literacy, communication, and maths¹ teaching and learning.

The Strategy is part of the Ministry of Education's wider work programme, which includes the refresh of *The New Zealand Curriculum and delivery of Te Whāriki: Early childhood curriculum*. More information about the Strategy can be found at [Literacy & Communication and Maths Strategy – Education in New Zealand](#)

In essence, the *New Zealand Curriculum* for schooling identifies 'what' to teach, and the Common Practice Model identifies 'how' to teach it.



¹Maths in the Strategy encompasses mathematics and statistics, including numeracy.

The Common Practice Model

A key part of the Strategy is the Common Practice Model. The Common Practice Model provides clarity and direction for literacy, communication, and maths teaching and learning from early learning through to the end of secondary schooling. It comprises:

- **principles** to guide teaching literacy, communication, and maths across the learning pathway; these are essential and enduring
- **pedagogical approaches** that are theoretical frameworks or approaches to teaching, informed by evidence of how ākonga learn
- **practices** that are purposeful acts of teaching
- **a suite of supports** for kaiako and leaders, including guides, resources and professional learning.

Phase 1 of the Common Practice Model (March 2023) outlines the principles and evidence-informed pedagogical approaches for teaching literacy, communication, and maths. It includes a high-level description of each pedagogical approach, search terms to support further research, and relevant references.

Phase 2 of the Common Practice Model (later in 2023) will include evidence-informed practices. These will include the purposeful acts of teaching in learning environments.

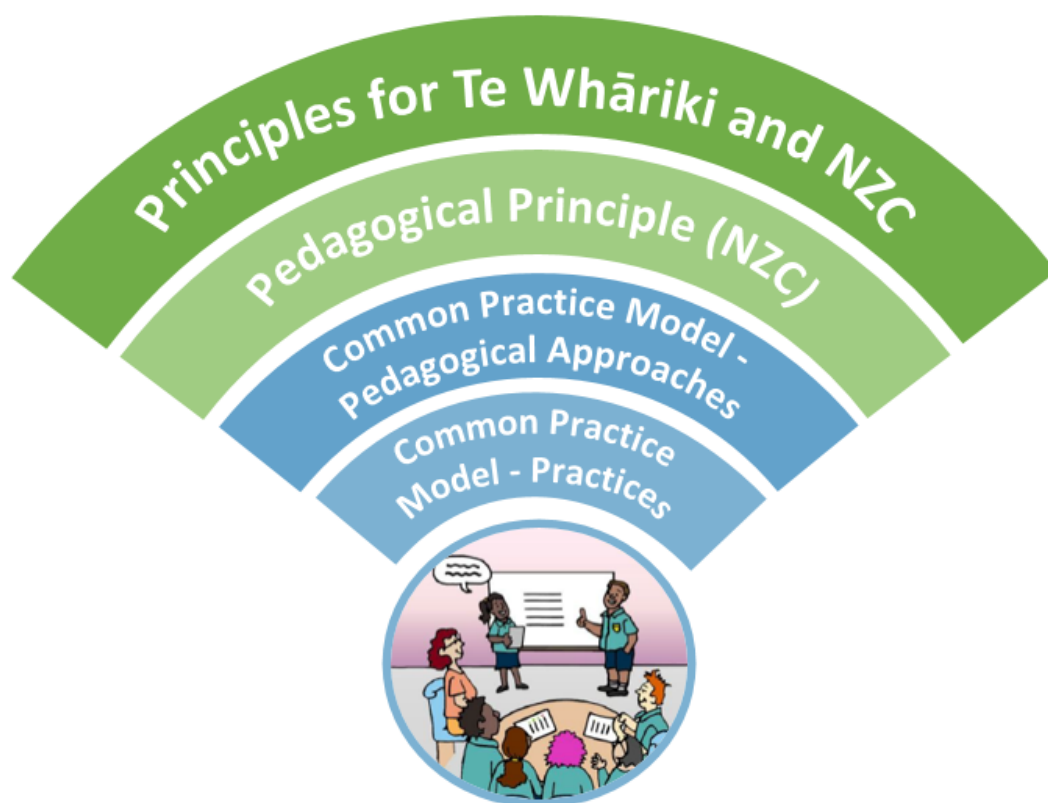
The Common Practice Model will be embedded into supports and resources, professional learning, and will influence Initial Teacher Education programmes (ITE).

Developing the Common Practice Model

Phase 1 of the Common Practice Model was developed collaboratively and reflects sector experiences and research findings. The Ministry of Education partnered with a group of expert contributors who identified and recommended key principles and pedagogical approaches. These were tested with focus groups, made up of education leaders and kaiako.

Principles

For ākonga, learning occurs in rich and diverse ways. The Common Practice Model aims to create space for all forms of knowledge to be honoured, sustained, and experienced; a space where cultural identities are valued alongside emerging identities within literacy, communication, and maths. Teaching and learning will be informed by communities, evidence, and research.



Contributors considered a range of principles but after deliberation determined that the visions and principles of *Te Whāriki* and *The New Zealand Curriculum* would also provide the necessary foundations for the Common Practice Model.

Pedagogical approaches

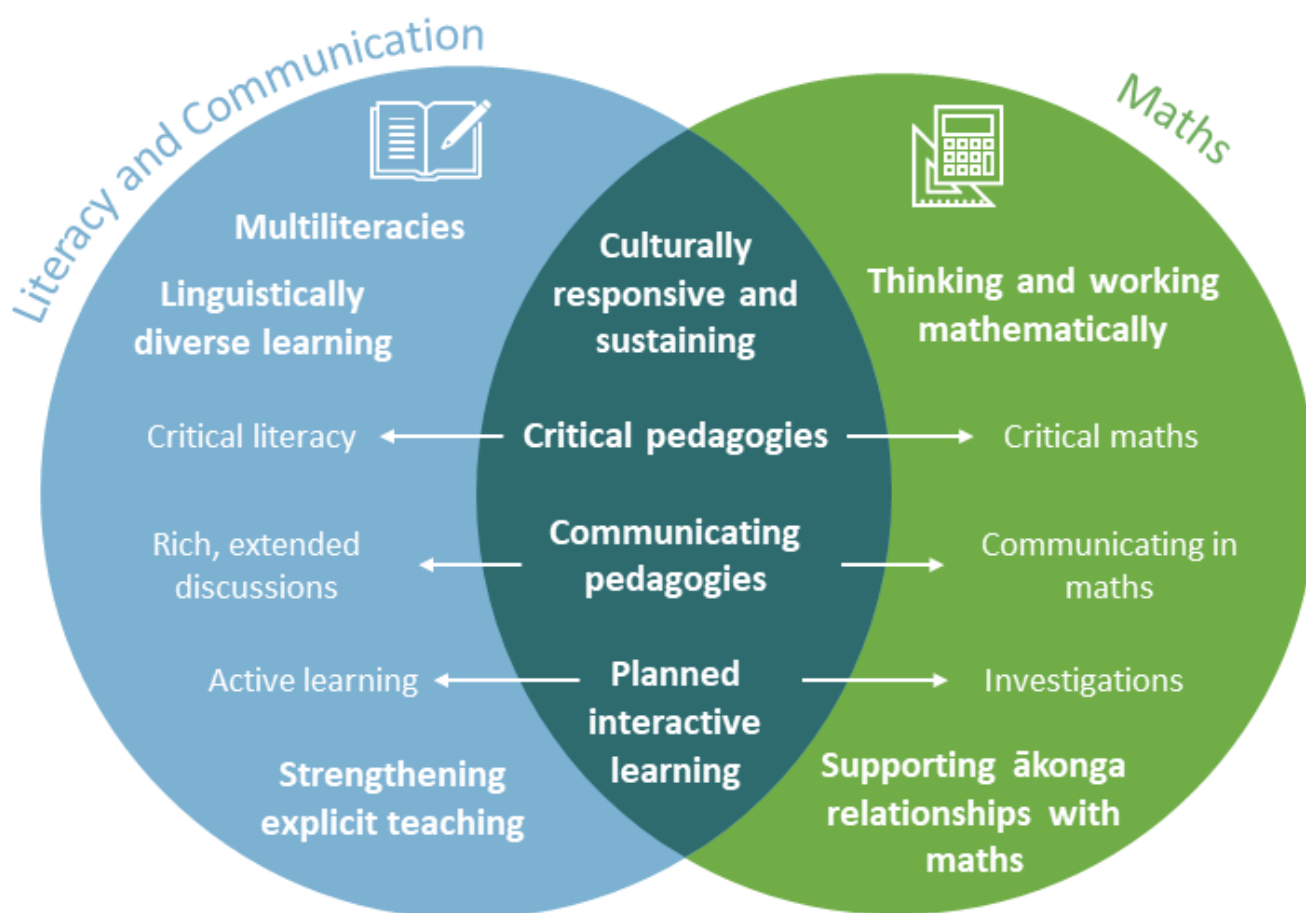
Every kaiako teaches literacy, communication, and maths.

The contributors group working with the Ministry identified pedagogical approaches specific to literacy, communication, and maths.

The pedagogical approaches have similarities and are informed by separate bodies of research, evidence, and disciplinary knowledge. Emphasis has been placed on the shifts in pedagogical approaches required to improve outcomes for ākonga in literacy, communication, and maths. For example, both groups emphasised the need for communicating pedagogies, while supporting ākonga relationships with maths was highlighted as a distinct pedagogical approach for maths. Relationships with literacy and communication are woven through the other pedagogical approaches. These pedagogical approaches will overlap and blend together in practice.

Overview of the pedagogical approaches

Theoretical frameworks or approaches to teaching, informed by evidence of how ākonga learn.



Shared pedagogical approaches

Culturally responsive and sustaining approach recognises, fosters, and values the diverse ethnicities, linguistic contexts, and cultural practices of all ākonga.

Critical pedagogies support ākonga to develop insights and skills to participate in and contribute to society.

- **Critical literacy** recognises that texts are socially constructed and not neutral, and involves interrogating and constructing texts.
- **Critical maths** is about using maths to think critically about societal issues and where appropriate, take action.

Communicating pedagogies provide a safe and encouraging environment for all ākonga to learn through communicating with kaiako and their peers.

- **Rich, extended dialogue in literacy and communication** provide opportunities for kaiako and ākonga to share their ideas and respectfully challenge thinking.
- **Communicating in maths** is used to develop understanding as well as to explain and justify thinking.

Planned interactive learning creates the conditions for exploring, thinking, discussing, investigating, and creating.

- **Active learning in literacy** and communication involves reciprocal and interactive experiences for ākonga and kaiako.
- **Investigations using maths** provides opportunities for ākonga to explore situations when the direction and outcome or the solution method is unknown at the beginning.

Specific pedagogical approaches

Literacy and communication

Multiliteracies recognise multiple modes of making meaning (visual, gestural, audio, spatial, and linguistic) within a range of social, cultural, and linguistic contexts.

Linguistically diverse learning has been identified as a pedagogical approach that requires further development before being released.

Strengthening explicit teaching in literacy and communication is a purposeful way of teaching ākonga knowledge, skills, and strategies for making and communicating meaning in oral, written, visual and multimodal forms.

Maths

Thinking and working mathematically provides ākonga with opportunities to work as a mathematician and a statistician.

Supporting ākonga relationships with maths is kaiako supporting ākonga to respond to challenge and be adaptable as well as providing opportunities for reflection.

Engaging with the Common Practice Model

Please share and discuss the Common Practice Model with your colleagues. Later in 2023 the Ministry of Education will engage with kaiako and leaders to gather feedback on the Common Practice Model and to identify areas for further development or clarification.

The Literacy & Communication and Maths Strategy is a 5-year strategy with phased implementation planned from 2025. The Common Practice Model will be ready for use from 2024 and we will start to roll out resources and professional learning supports from 2024.

Please reflect on the following and discuss with your colleagues:

- Our videos on the Strategy and the Common Practice Model, which describe the connections with other Ministry workstreams and highlight the contributions of kaiako and leaders to the development of the Common Practice Model.
- Our one-pagers, which provide an overview of the pedagogical approaches, an overview of the Common Practice Model and a description of how it was developed.
- Consider what the Common Practice Model might mean for your approach to literacy, communication, and maths.
- Reflect on your current practices in relation to the pedagogical approaches outlined in the Common Practice Model and consider where you may have strengths and where you could focus future development.

The videos and one-pagers are on the Ministry's website at [Common Practice Model – Education in New Zealand](#)

Remember, phase 1 of the Common Practice Model focuses on the principles and evidence-informed pedagogical approaches for teaching literacy, communication, and maths. The practices – the purposeful acts of teaching in learning environments – will be included in phase 2 of the Common Practice Model, which will be released later in 2023.



Please visit our website for more information about:

- The Literacy & Communication and Maths Strategy: [Literacy & Communication and Maths Strategy – Education in New Zealand](#)
- The Common Practice Model: [Common Practice Model – Education in New Zealand](#)

You are also welcome to contact us at literacy.communication.maths@education.govt.nz

Culturally responsive and sustaining approach

A culturally responsive and sustaining pedagogical approach recognises, fosters, and values the diverse ethnicities, linguistic contexts, and cultural practices of all ākonga.

A culturally responsive and sustaining pedagogical approach values and builds upon the knowledge, values, languages, cultures, identities, whānau, communities, lived experiences, and whakapapa of ākonga. Kaiako recognise and actively redistribute power and status among all members of the learning community. The cultures, languages, homes, and lived experiences of ākonga influence how they understand and make sense of the world and are an integral part of who they are as learners. This approach strengthens the sense of identity and well-being of ākonga and promotes equity and inclusivity in learning environments.

Search terms

Culturally relevant pedagogy, culturally responsive teaching, culturally sustaining, relational pedagogies, equity, equitable, diversity

More detail

- value, foster, and strengthen cultural ways of being, knowing, and doing, including encouraging ākonga to communicate in their home languages
- establish pedagogical practices in ways that align with the values and cultural ways of being of ākonga
- value the cultural knowledge of the context or artefacts being used.

In maths	In literacy and communication
Kaiako: <ul style="list-style-type: none">• recognise that the artefacts, concepts, and ideas of maths are cultural• position ākonga to see maths as part of their culture• integrate maths learning and ākonga contexts and interests, weaving this with what is being taught throughout the learning.	Kaiako: <ul style="list-style-type: none">• select and use texts or materials that reflect the diverse linguistic practices and cultural identities of ākonga• encourage the use of ākonga narratives as valued resources in the learning environment• support ākonga in acquiring the language and literacies of <i>The New Zealand Curriculum</i> and <i>Te Whāriki</i>, while maintaining and strengthening their heritage languages.

References

In maths	In literacy and communication
<p>Averill, R., Anderson, D., Easton, H., Maro, P. T., Smith, D., & Hynds, A. (2009). Culturally responsive teaching of mathematics: Three models from linked studies. <i>Journal for Research in Mathematics Education JRME</i>, 40(2), 157-186. [hyperlink]</p> <p>Hunter, J., & Miller, J. (2022). Using a culturally responsive approach to encourage early algebraic reasoning with diverse young learners. <i>International Journal of Science and Mathematics Education</i>, 20, 111-131. [hyperlink]</p> <p>Thomas, C., & Berry III, R. (2019). A qualitative meta synthesis of culturally relevant pedagogy & culturally responsive teaching: Unpacking mathematics teaching practices. <i>Journal of Mathematics Education at Teachers College</i>, 10(1), 21-30. [hyperlink]</p>	<p>Hindle, R., & Matthewman, S. (2017). Māori literacies: Ecological perspectives. <i>Set: Research Information for Teachers</i>, (3), 32-37. [hyperlink]</p> <p>Kelly, L. B., Wakefield, W., Cairns-Hurley, J., Kganetso, L. W., Moses, L., & Baca, E. (2021). What is culturally informed literacy instruction? A review of research in P-5 contexts. <i>Journal of Literacy Research</i>, 53(1), 75-99. [hyperlink]</p> <p>Si'ilata, R. (2019). Va'atele: Enabling Pasifika literacy success. <i>Literacy Forum NZ</i>, 34(1), 13-24. [hyperlink]</p>



Critical pedagogies

A critical pedagogical approach supports ākonga to develop insights and skills to participate in and contribute to society.

In maths	In literacy and communication
Critical maths	Critical literacy
A critical maths pedagogical approach uses maths to develop critical awareness about wider social, environmental, political, ideological, and economic issues. Critical maths recognises the importance of understanding, interpreting, and addressing issues of power, social justice and equity in the community and the wider world. Ākonga are encouraged to interrogate dominant discourses and assumptions, including that maths is benign, neutral, and culture-free.	Critical literacy recognises that texts are socially constructed and not neutral. It involves interrogating and constructing texts. Critical literacy is more than critical thinking. It involves identifying how texts position readers by analysing inclusion, exclusion, and representation. At the heart of critical literacy is an understanding of the relationship between language and power. Texts may be oral, visual, audio, gestural, spatial, or multimodal. This includes digital literacy.
Search terms	Search terms
Data sovereignty, humanising mathematics, teaching maths for social justice (TMfSJ), ethnomathematics, maths + {conscientisation, equity, ethics, citizenship}	Text analyst, text user, critical analysis, discourse analysis, critical multiliteracies
More detail	More detail
The goal is to develop the agency of ākonga as critically aware mathematical and statistical thinkers who can communicate their position on issues. A critical pedagogical approach encourages ākonga to question mathematical and statistical processes, assumptions, representations, including models and graphs, and ways of interpreting context.	<p>Texts reflect relationships between groups of people. Text creators make certain conscious and sub-conscious decisions when constructing texts, using text features that reflect ideological positions. Critical literacy provides the mechanisms for analysing, interrogating, and communicating those decisions. Becoming critically literate enables ākonga to develop agency and a social conscience. Examples of this might include discussion of representations of people in picture books, interacting constructively on digital platforms, and engaging in informed discussion and analysis relating to broader social issues.</p> <p>Critical literacy involves a deeper level of analysis than critical thinking. Critical thinking involves reflecting on texts and interpreting and evaluating the meaning conveyed rather than interrogating social positioning. Opportunities for developing critical literacy should be contextualised in the learning environment and encourage ākonga to be confident in expressing their viewpoints in relation to positioning in texts.</p>

In maths	In literacy and communication
<p>Kaiako:</p>	<p>Kaiako:</p>
<ul style="list-style-type: none"> • develop a learning culture where ākongā equitably participate in all aspects of learning maths • consider and evaluate both the intended and unintended consequences of what maths is taught and the ways it is taught • encourage ākongā to use cultural tools to participate and contribute to the world • support ākongā to pose probing and critiquing maths and socio-cultural questions at every stage of their working processes • are open to different perspectives and experiences of thinking in maths • conduct discussion, analysis, and examination of dimensions of socio-cultural issues in maths investigations • explore, develop, and apply ethical understanding in maths learning • support ākongā to understand the relationship between mathematics, technologies, innovations, and people and how they interact to address social justice and equity. <p>When ākongā are critically aware mathematical and statistical thinkers, they are open to robust conversations where they draw from maths justification and argumentation. They ask critical questions and challenge assumptions made from maths findings.</p>	<ul style="list-style-type: none"> • encourage ākongā to identify the purpose of texts and how authors construct them to achieve that purpose • use a variety of texts that reflect a range of ideological perspectives on social, cultural, political and environmental issues • use prompts to encourage authentic conversation in relation to text purpose and structure, gaps and silences, power and interest, as well as whose view of reality is being presented • support ākongā to synthesise, evaluate, compare, and contrast texts from a variety of sources • develop ākongā understanding of the authenticity of texts, as well as bias • encourage ākongā agency through opportunities to create texts that are purposeful in conveying their positioning on issues • scaffold critical literacy through large or small-group discussions using questions that encourage ākongā to consider the position of the author and articulate their thinking through dialogic interaction • encourage consideration of existing knowledge and perspectives – how does this new understanding influence ākongā thinking? • provide instruction in how text creators use text features, vocabulary, and form in relation to purpose, audience and situational context • support ākongā to understand the modes of language used and the meaning conveyed prior to critical examination. This might require multiple ‘readings’ of the text. <p>Through engaging in learning opportunities involving critical literacy, ākongā develop critical awareness of wider social issues. Ākongā develop metacognitive and metalinguistic skills that provide agency for them to both construct and interrogate a range of texts, contributing to development of their own identity. Ākongā understand that texts cannot be taken at face value, and that they are socially constructed and not neutral.</p>

References

In maths	In literacy and communication
<p>Bills, T., Sawatzki, C., & Hunter, J. (2021). 'Pākehā get more money than the other cultures': Teaching Pāsifika students with and for a social justice orientation. In T. Lucey (Ed.), <i>Financialization, financial literacy, and social education</i> (pp. 23-41). Routledge. [hyperlink]</p> <p>Bishop, A. J. (2001). What values do you teach when you teach mathematics? <i>Teaching Children Mathematics</i>, 7(6), 364-349. [hyperlink]</p> <p>Greenstein, S., & Russo, M. (2019). Teaching for social justice through critical mathematical inquiry. <i>Occasional Paper Series, 2019</i> (41). [hyperlink]</p> <p>Holton, D. (2010). Mathematics: What? Why? How? <i>CULMS Newsletter</i>, (1), 21-26. [hyperlink]</p> <p>Jung, H. & Brand, S. (2021). Student actions for social justice-oriented mathematical tasks. <i>Mathematics Teacher: Learning and Teaching PK-12</i>, 114(5), 378-385. [hyperlink]</p>	<p>Abbiss, J. (2016). Critical literacy in support of critical-citizenship education in social studies. <i>Set: Research Information for Teachers</i>, (3), 29-35. [hyperlink]</p> <p>Behrmann, E. H. (2006). Teaching about language, power and text: A review of classroom practices that support critical literacy. <i>Journal of Adolescent & Adult Literacy</i>, 49(6), 490-498. [hyperlink]</p> <p>Sandretto, S., & Klenner, S. (2011). <i>Planting seeds: Embedding critical literacy into your classroom programme</i>. NZCER Press.</p> <p>Sandretto, S. & Tilson, J. (2013). Reconceptualising literacy: <i>Critical multiliteracies for "new times"</i>. Teaching & Learning Research Initiative. [hyperlink]</p> <p>Sandretto, S., Tilson, J., & Shafer, D. (2021). Critical literacy praxis in Aotearoa New Zealand. In J. Z. Pandya, R. A. Mora, J. H. Alford, N. A. Golden, & R. S. de Roock (Eds.), <i>The Handbook of Critical Literacies</i> (pp. 117-124). Routledge. [hyperlink]</p>



Communicating pedagogies

Communication pedagogies provide a safe and encouraging environment for all ākonga to learn through communicating with kaiako and their peers. Communication pedagogies enable ākonga to develop, strengthen and deepen their thinking, their ability to express ideas and their understanding of others' views.

In maths	In literacy and communication
<p>Communicating in maths</p> <p>Communicating in maths is used to develop ākonga understanding of maths and to explain and justify their mathematical thinking. Through interactions between kaiako and ākonga, and ākonga and their peers, ākonga build understanding of maths concepts, facts, and procedures. Kaiako need to explicitly encourage and teach communicating in maths so that ākonga can articulate and describe their thinking. This gives them access to a wider range of mathematical ideas. Maths has a specific language and a range of tools that represent and express thinking.</p>	<p>Rich, extended dialogue in literacy and communication</p> <p>Rich, extended dialogue is where teaching and learning occurs through, for and as dialogue. This is also known as dialogic teaching. The power of talk is enhanced where there are opportunities for rich extended dialogue and interaction between kaiako and ākonga, and ākonga to ākonga. A dialogic approach is the exchange of ideas in a wide range of communication modes. It recognises that languages are the vehicle for connecting learning, teaching, and cognitive development.</p> <p>In discussion for learning, ākonga and kaiako share and respectfully challenge one another's ideas, and identify viewpoints, interpretations, and perspectives to extend and advance their thinking and understanding.</p>
<p>Search terms</p>	<p>Search terms</p>
<p>Maths + {dialogic, second language learning, interthinking, discourse, multi-modal communication, representations and models, register, collaborative learning, cooperative learning}</p>	<p>Dialogic, rich extended discussion, active listening, serve and return, talk about text, quality talk, productive talk, metacognition</p>
<p>More detail</p> <p>Communicating mathematically and doing maths are inseparable. In mathematical communication, ākonga use their everyday language as well as unique mathematical terminologies, syntax, representations, and meanings. Communicating in maths involves using and transitioning between multimodal aspects of maths. Communicating also involves ākonga reflecting upon, clarifying, and expanding their ideas of mathematical relationships, arguments, and concepts. Access to a variety of ways of communicating allows all ākonga to access mathematical thinking and concept development.</p>	<p>More detail</p> <p>Better dialogue is a positive outcome because it builds a learning environment that upholds the personal, social, cultural and emotional knowledge and experiences of ākonga, valuing their voice and their perspectives.</p> <p>A dialogic approach builds the foundation for communication and literacy development including comprehension, writing, listening, speaking, presenting and viewing.</p> <p>Responsive, dialogic interactions that are promoted in early learning build ākonga confidence to enter into productive communication or debate with others. This will support ākonga to hear other ideas, make meaning and respond through rich, extended discussion. The emphasis on reciprocity and connection between people will support ākonga to capitalise on the power of talk to foster their thinking, understanding and learning. Kaiako actively support the development of dialogic interaction from an early age.</p>

In maths	In literacy and communication
<p>Kaiako:</p>	<p>Kaiako:</p>
<ul style="list-style-type: none"> • set up a safe, supportive environment for ākonga to communicate in ways that ensures equitable participation • orchestrate opportunities for ākonga to discuss and present their thinking • encourage discussions and oral rich learning settings that include and honour ākonga home languages and values • explicitly teach ākonga how to communicate their mathematical thinking in multi-modal ways, for example, drawing, writing, listening, talking, viewing, signing, gesturing, and modelling • use mathematical language appropriate to the context and purpose • model the language of mathematics by accepting informal and tentative talk while adopting disciplinary language over time • use different types of maths genre for written and multi-modal communication, for example, procedural, explanatory, dissemination, justifying • choose mathematical tasks which promote rich discussion and encourage all aspects, systems, and processes of wānanga • use technology to support ākonga to communicate maths and make meaning using multiple representations to compare, contrast, and critique. 	<ul style="list-style-type: none"> • provide opportunities for collective, supportive, reciprocal, thoughtful, cumulative, purposeful interaction • provide opportunities for language development through productive interaction; building oral language and questioning skills • thoughtfully plan opportunities for ākonga to share different viewpoints, perspectives, and arguments • carefully select resources that will advance thinking and understanding and allow for open discussion where ākonga are free to reason and seek clarification as they connect ideas together • provide opportunities for kaiako and ākonga to ask questions that are purposeful, authentic, and open-ended • encourage and support ākonga to build and add on to previous thinking in the discussion, including addressing misconceptions, and challenging ideas and opinions • teach the skills of being able to substantiate, evaluate, integrate, reason, weigh evidence to support decision making or rational conclusions, and attend to counterclaims, which may result in a critically reasoned conclusion (or offer a platform for further questions) • are prepared for unexpected outcomes in discussion and interaction and know when to let the discussion develop and be led in new directions by ākonga. <p>Rich extended dialogue can develop ākonga metacognitive strategies, providing opportunities to voice their opinions and reasoning and actively listen to the perspectives of others.</p>



In maths	In literacy and communication
Ākonga:	Ākonga:
<ul style="list-style-type: none"> • communicate ideas and thinking in maths language, including correct mathematical syntax • transition between multiple maths representations to communicate thinking • work with peers to share ideas and build understanding in maths • communicate ideas and thinking about maths with their whānau and communities. 	<ul style="list-style-type: none"> • engage in discussion about texts: how a text works, what a text is, and how words work • learn language and vocabulary to support metacognition • participate in reasoned and evidence-based argument, developing vital skills for future whānau, community and civic discussions • reflect on their own participation in the discussion • develop greater awareness of other perspectives and viewpoints which could lead to changes in their original views • develop intellectual consciousness and a sense of the purpose and value of why they are engaging in these discussions and not simply answering questions or working alone.



References

In maths	In literacy and communication
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Planned interactive learning

Ākonga engage in planned interactive learning experiences that create the conditions for exploring, thinking, discussing, investigating, and creating.

In maths	In literacy and communication
Investigations using maths	Active learning in literacy and communication
<p>Investigations using maths involves kaiako providing opportunities for ākonga to explore situations when the direction and outcome or the solution method is unknown at the beginning. The investigation can be prompted by kaiako, the local context, or ākonga.</p> <p>An investigation often involves a cycle or process of inquiry such as problem solving, statistical inquiry, or mathematical modelling. In collaboration with their peers, ākonga are supported to use multiple tools and representations, build connections between ideas, and attend to underlying structures.</p>	<p>Active learning involves reciprocal and interactive experiences for ākonga and kaiako. Ākonga will have opportunities to use prior learning and make connections to consolidate new learning. Active learning is planned, supported and safe, with kaiako actively involved in the learning.</p> <p>Ākonga develop knowledge, understanding, skills, strategies, and metacognition through a variety of activities across different contexts. Active learning requires ākonga to engage in higher-order thinking.</p>
Search terms	Search terms
PPDAC cycle, maths + {modelling, problem solving, Inquiry-based pedagogies, learning through play pedagogies}	Active learning, learning through play, explorative learning, active engagement, working theory
More detail	More detail
Maths investigations give ākonga opportunities to apply and develop maths knowledge and understanding through investigating situations of interest to them and their communities. Learning through play, exploration, and investigation encourages mathematical curiosity and critical thinking to make sense of their world.	Active learning is purposeful and builds motivation, mana, and ākonga agency through active engagement and participation. Active learning opportunities build on ākonga interests and social, cultural, emotional, and linguistic backgrounds. Active learning provides rich communication, exploration, experimentation, creativity, problem solving and collaboration. It provides ākonga with opportunities to build metacognition because they are socially and emotionally engaged in consolidating learning across contexts and modes

In maths	In literacy and communication
<p>Kaiako:</p> <ul style="list-style-type: none"> • find or design tasks which are open and accessible, as well as variety in duration from short, contained tasks to longer-term investigations • design tasks around interests of ākonga and local communities, including through responding flexibly to playful and inquiry-based explorations of ākonga • anticipate and respond to different ākonga approaches and are open to unanticipated interpretations and unexpected solutions • use a combination of explicit teaching, guided exploration, and independent discovery • challenge thinking of ākonga by using appropriate questioning and provocation, such as adding or removing scaffolded support • promote mutual understanding, collaboration, and all aspects, systems, and processes of wānanga • encourage use of technologies to support ākonga to interrogate, manipulate, and experiment in their investigation • summarise and reflect the learning journey with ākonga. 	<p>Kaiako:</p> <ul style="list-style-type: none"> • model turn-taking (including serve and return) and provide multiple opportunities for communication between ākonga and between ākonga and kaiako • purposefully plan for, and design engaging learning experiences to consolidate learning and apply in familiar and new contexts • provide activities and opportunities for ākonga active learning across cultural and linguistic contexts, including in their heritage language • set up the environment to enable ākonga learning in relation to learning goals and the teaching focus • build in time in their teaching to notice and observe the processes of learning to build and extend ākonga working theories • are actively involved in the learning experience, for example, engaging in high quality interactions, and asking literal, inferred, and applied questions to prompt deeper thinking and extend working theories • encourage tuakana-teina partnerships • encourage ākonga to take responsibility for participation in their learning.
<p>Ākonga:</p> <ul style="list-style-type: none"> • become familiar with the investigation context or situation through exploration, play, and wondering • use their existing knowledge or working theories to develop evolving ideas and concepts and purposefully move beyond following existing procedures • use intuition, systematic exploration, and mathematical and statistical practices, such as conjecturing, reasoning, and justifying • persevere, cooperate, work independently, take risks, and become flexible • cultivate shared responsibility among peers as they work through the process and task. 	<p>Ākonga:</p> <ul style="list-style-type: none"> • transfer and extend learning to new contexts • collaborate with others to explore and extend language and to develop communication skills and social norms • engage across different socio-cultural and learning contexts to support and consolidate learning

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In maths	In literacy and communication
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Multiliteracies

In the 21st century, ākonga need to communicate, interpret texts, and create texts in multiple modes of meaning (visual, gestural, audio, spatial, and linguistic) within a range of social, cultural, and linguistic contexts. A multiliteracies approach recognises these diverse contexts and multiple text forms.

A multiliteracies approach challenges traditional literacy pedagogies focused solely on written and oral language. Instead, it emphasises all modes of communication to meet the needs of all students, reflecting and valuing linguistic and cultural diversity and the use of new technologies. The term 'text' is used here and in all other pedagogical approaches in its broadest sense, encompassing visual, gestural, audio, spatial and linguistic modes of meaning.

A multiliteracies approach:

- values all ākonga literacies as resources that provide rich learning opportunities for all. It is a culturally responsive and sustaining pedagogy
- recognises the importance of making connections between home and learning space literacies through educationally powerful relationships with whānau
- includes all language systems and forms of literacy including New Zealand Sign Language and use of augmentative and alternative communication devices
- recognises the five modes of meaning-making (visual, gestural, audio, spatial, linguistic) and values different forms of representation
- recognises the interactive nature of meaning-making in both offline and digital spaces (for example, gaming and social media)
- has an explicit focus on making links between the receptive and productive modes of meaning-making, such as reading and writing or viewing and presenting.



Search terms

Multiliteracies, multimodality, metalanguage, critical multiliteracies, critical literacy, curriculum literacies, disciplinary literacies

More detail

A multiliteracies approach gives practical effect to Te Tiriti o Waitangi by honouring multiple languages, dialects, and cultural contexts and by recognising traditional, new, and emerging modes of communication.

Globalisation and technological changes are resulting in increasingly multi-modal and linguistically diverse texts. Learning how to communicate, interpret texts, and create texts in today's environment is critically important.

Kaiako:

- build ākonga dispositions to engage in and interpret meaning from texts in multiple modes. This includes providing opportunities for all ākonga to use and develop all modes of meaning-making when communicating, interpreting text, and creating text
- provide authentic experiences where ākonga can engage with multiple literacies that reflect the learning environment, home, community, or other lived experiences
- explicitly teach and use metalanguage that describes the form, content, and function of texts
- teach ākonga to apply their knowledge of different forms of representation to meet their goals and purposes including those of their whānau and communities
- teach ākonga to translate and transform texts and ideas across and within modes for different purposes and audiences in ways that are consistent with their own goals and values
- equip ākonga to recognise the impact of their and others' interactions in offline and digital environments. This includes social media and gaming
- provide ākonga with opportunities to demonstrate their new literacy learning across all modes for assessment purposes. Kaiako notice and gather evidence and embrace broad forms of assessment and definitions of literacy success.

Ākonga are able to communicate, create, and interpret texts:

- using visual, gestural, audio, spatial, linguistic modes of meaning
- within a range of social, cultural, and linguistic contexts, including the different strands of *Te Whāriki* and learning areas of *The New Zealand Curriculum*.

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Linguistically diverse learning (work in progress)

This has been identified as a pedagogical approach that requires further development before being released. Ākonga learning te reo Māori as their heritage language, non-Māori learning te reo Māori, Pacific languages, and English for speakers of other languages will be collaboratively developed to ensure this pedagogical approach supports all ākonga.

Search terms

Heritage language, target language, translanguaging, code switching, language revitalisation, language maintenance, multimodal, common underlying proficiency, BICS, CALP, metatalk

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Strengthening explicit teaching in literacy and communication

Strengthening explicit teaching is a purposeful way of teaching ākonga knowledge, skills, and strategies for making and communicating meaning in oral, written, visual and multimodal forms. This is referred to as intentional teaching in early learning settings.

Note:

Explicit teaching is an approach that kaiako currently use in maths, and it needs to be combined with other pedagogical approaches throughout the teaching and learning process. Within the descriptions of other pedagogical approaches, we have outlined what needs to be explicitly taught in a maths context.

Explicit literacy and communication teaching also needs to be combined with other pedagogical approaches and has been highlighted because it is a significant shift in literacy and communication teaching advice.

Explicit teaching encompasses knowledge about words, language, strategies and processes, texts, and the world. It is based on knowledge of what ākonga already know and what they need to learn next. Explicit teaching typically includes incremental steps that incorporate effective modelling, verbalising thinking, and guided practice with prompt corrective, responsive and constructive feedback. Through explicit teaching, kaiako ensure that ākonga develop a clear understanding of the 'what, why and how' of the learning.

Search terms

Direct teaching, intentional teaching, explicit direct instruction, systematic, structured literacy, diagnostic, scope and sequence, strategy instruction, feedback, cognitive load theory, diagnostic assessment, science of learning

More detail

Explicit teaching is essential for ākonga struggling with aspects of literacy and communication learning because it supports kaiako to identify strengths and gaps in key skills, strategies, and knowledge. Kaiako can provide clear, unambiguous, and carefully scaffolded instruction at an appropriate pace.

Explicit teaching has important roles in building readiness to engage in new learning and in correcting gaps and misconceptions as they arise. Sometimes ākonga can explicitly teach their peers, with kaiako overseeing and contributing their expertise and knowledge when necessary.

Kaiako

When explicitly teaching literacy and communication, kaiako often begin teaching by reviewing prior learning that provides the basis for new learning. Kaiako provide clear explanations and descriptions of the specific knowledge, skill or strategy being taught. The level of purpose, explanation and reason for learning will depend on where ākonga are on the learning pathway from early learning through to senior secondary. Explicit teaching often is part of a systematic, cumulative, planned sequence of instruction which moves from simple to complex. Explicit teaching is best used when learning is new and can't be expected to be discovered by most individual ākonga, and when misunderstandings and gaps have been identified.

In early learning, language and communication learning experiences will enable explicit language learning as the foundation for building the dispositions and foundations for ongoing communication and literacy development.

In the first phase of learning in primary school, explicit teaching should focus on learning the alphabetic code and how to use this to decode and encode, phonological and phonemic awareness, handwriting, vocabulary development, oral language skills and sentence construction.

At all stages, explicit teaching focuses on developing ākonga knowledge of:

- vocabulary, including word meanings, morphemic awareness, and connotations
- more complex sentence construction through to paragraph and text composition (syntax and semantics)
- how texts work, including knowing about text structures and language features, and how to use this knowledge to make and communicate meaning
- background knowledge needed to understand and create meaningful texts, including cultural knowledge, general knowledge, domain knowledge, and topic knowledge
- strategies and processes for gaining meaning from text and in oral communication.

Planning has a critical role in making explicit teaching effective. Planning needs to be intentional and well-crafted to meet the needs of all ākonga and help them achieve successful learning outcomes. Kaiako are reflective and adaptive according to the responses from ākonga during the lesson. Kaiako notice, recognise and respond so they can identify the strengths and learning needs of ākonga (including the specific incremental steps that may be required). Explicit teaching acknowledges that kaiako have valuable understandings and expertise in learning processes that they can use to improve learning outcomes.

This pedagogical approach is not 'chalk and talk', strictly following a recipe without adapting teaching in response to ākonga, nor withholding new learning due to perceptions of readiness.

Ākonga:

- are clear about what they are learning
- have a reduced cognitive load
- experience high levels of success, which enhances ākonga motivation and engagement.

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Thinking and working mathematically

Thinking and working mathematically provides ākonga with opportunities to work as a mathematician and a statistician.

Thinking and working mathematically involves recognising patterns and relationships, as well as making conjectures, forming generalisations, connecting different ideas, and building maths explanations and arguments. These mathematical processes are used to explore, solve problems, investigate situations, and understand concepts.

Search terms

Thinking mathematically, ambitious mathematics teaching, mathematical practices, statistical inquiry

More detail

Mathematical thinking is a pathway to deeper understanding of concepts and the world which goes beyond remembering and working with facts and procedures. It can be messy and often involve false starts, getting stuck and not always being correct. By thinking and working mathematically, ākonga views of maths are broadened to realise mathematical creativity and beauty. Ākonga understand why patterns hold, why strategies work, how data tells a story, and can reason whether statements are true.

Kaiako:

- help ākonga take advantage of opportunities for exploration, problem solving, remembering, predicting, and making comparisons and to be enthusiastic about finding solutions together
- explicitly teach how to engage with maths processes, including making conjectures, forming generalisations, and connecting different ideas
- set up the learning environment to promote questioning, collaborating, communicating, and mathematical argumentation
- recognise maths thinking, such as noticing ākonga conjectures and working theories, and responding to it at an appropriate time
- promote the use of technological skill, knowledge, and tools to support ākonga, including the application of these technologies to create, enhance, form ideas, replicate and be innovative within mathematical processes
- provide space for reflecting on learning.

Ākonga:

- become curious, innovative; questioning assumptions, and being sceptical while developing mathematical intuition and instinct
- use and learn mathematical processes, such as wondering, noticing patterns and structures, making conjectures and predictions
- make connections between multiple representations, concepts and ideas, reasoning and justifying, generalising, and proving
- experiment and use trial and improvement to find solutions to problems
- use previous experience as a basis for trying out alternative strategies
- become sense makers, explore different perspectives, give reasons for their choices, and argue logically
- use technology effectively, efficiently, and for innovation
- transition between multiple mathematical representations, for example, objects, pictures, words, symbols, tables and graphs, and concrete to abstract.

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Supporting ākonga relationships with maths

Supporting ākonga relationships with maths involves kaiako supporting ākonga to respond to challenge and being adaptable, as well as providing opportunities for reflection.

Note:

In Literacy and Communication, support for learner dispositions is described within other pedagogical approaches.

Ākonga have unique, complex, and dynamic relationships with maths that are inextricably linked to their cognitive processes. These relationships encompass feelings and emotions related to maths, beliefs about the nature of maths, and its usefulness and importance. Relationships with maths also include mathematical knowledge, habits of engagement, expectations of success, and how they view themselves as mathematicians. As ākonga experience maths, these relationships develop through interactions between ākonga, kaiako, and whānau, and through the ways mathematics is portrayed and used in homes, communities, and societies.

Search terms

Maths + (affect, identities, dispositions, growth mindset, productive struggle, perseverance)

More detail

Ākonga relationships with maths impact the ways they engage with each task, the emotions they experience during that task, their learning outcomes, and the ways they make sense of and integrate maths in their lives. Ākonga develop positive and functional relationships with maths when kaiako notice these emotions and use them as signals to encourage ākonga to persevere, learn from mistakes, try different pathways, or discuss the task with others. When ākonga build positive and functional relationships with maths, they see how maths is used in society and connect maths to their communities and other areas of their learning.

Kaiako:

- know ākonga as a member of whānau and communities, and as individuals with a dynamic relationship with maths
- have high expectations, and are explicit with ākonga that maths capabilities can develop over time
- provide explicit opportunities to develop skills and dispositions of ākonga in perseverance, cooperation, independence, taking risks, and adaptability
- are actively engaging in maths themselves, model confusion and mistake-making, and reflect on their own relationship with maths
- build, along with their ākonga, a positive and supportive learning environment
- provide a variety of rich, open tasks and lesson sequences that vary in contexts, complexity, ways of working, structure, and autonomy
- provide regular opportunities for both challenge and consolidation.

Ākonga:

- have a broad view of maths and see the usefulness, creativity, and beauty of maths
- have confidence in their own developing mathematical and statistical capabilities
- are resilient, expect challenge, and embrace confusion
- are reflective about their engagement with maths.

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