

NOT GOVERNMENT POLICY

New Zealand Curriculum Refresh: Progressions Approach

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Contents

| | |
|--|-----------|
| Overview..... | 3 |
| Part 1: A Progressions Approach to Curriculum | 4 |
| What is the purpose of a national curriculum? | 4 |
| Where have we come from? | 4 |
| What’s different about a progression-focused curriculum? | 6 |
| Why develop a progression-focused curriculum? | 7 |
| Features that curriculum progressions should show | 8 |
| <i>Curriculum progressions recognise that learning does not always proceed in the same way</i> | 9 |
| <i>Research evidence is used to inform curriculum progressions and to improve them</i> | 9 |
| <i>Curriculum progressions are usually developed around anchor points</i> | 9 |
| <i>Progression depends on purposeful and rich learning opportunities</i> | 10 |
| <i>Curriculum progressions in one domain can interact with progressions in another domain</i> | 10 |
| <i>Curriculum progressions emphasise progression and development</i> | 10 |
| Part 2: A Bicultural Approach to Curriculum | 10 |
| Why develop a bicultural curriculum?..... | 11 |
| <i>Curriculum entitlement for Māori learners</i> | 11 |
| <i>Bicultural entitlement for all learners</i> | 12 |
| Principle driven decision making | 12 |
| Part 3: Revisiting the NZC principles | 13 |
| <i>Principle 1: Treaty of Waitangi</i> | 13 |
| <i>Principle 2: Community engagement</i> | 14 |
| <i>Principle 3: Coherence</i> | 14 |
| <i>Principle 4: Learning to learn</i> | 15 |
| <i>Principle 5: Future focus</i> | 16 |
| <i>Principle 6: Cultural diversity</i> | 17 |
| <i>Principle 7: High expectations</i> | 18 |
| <i>Principle 8: Inclusion</i> | 18 |
| Part 4: An evolving curriculum: what else have we learned? | 20 |
| Curriculum as a useful tool for schools and teachers..... | 20 |
| <i>Clarity</i> | 20 |
| <i>Completeness</i> | 21 |
| <i>Aspirations, priorities, and realistic content</i> | 22 |
| <i>Ākonga Entitlement</i> | 22 |
| <i>Valuing mātauranga Māori</i> | 23 |
| <i>An emphasis on knowledge-building practices</i> | 23 |
| <i>Consistency across learning areas</i> | 24 |
| <i>The empirical base</i> | 24 |

| | |
|--|-----------|
| Part 5: An Overarching Model for a Progression-focused Bicultural Curriculum..... | 25 |
| Nāu i whatu te kākahu, he taniko tāku Conceptualising the model | 25 |
| Ko te pae tawhiti, whāia kia tata Vision | 26 |
| Whakapapa Defining the outcome | 26 |
| Te aho tapu Setting a clear focus..... | 27 |
| Kotahi te aho ka whati; ki te kāpuia e kore e whati Weaving connections and durability | 28 |
| <i>Contexts worth exploring</i> | 29 |
| <i>Rich opportunities to learn</i> | 29 |
| Whakanikohia Adorning the cloak..... | 29 |
| | |
| Part 6: A focus on the curriculum elements..... | 30 |
| Tauākī ako Purpose statements..... | 32 |
| <i>Linking to society’s overall vision for ākonga</i> | 32 |
| A framework for signalling breadth, depth, and complexity of learning over time | 33 |
| Signals about progression..... | 35 |
| Final thoughts..... | 40 |

Tables

| | | |
|---------|--|----|
| Table 1 | Differences between a progression-focused and our current outcomes-focused curriculum | 6 |
| Table 2 | Possible categories and prompts to consider when developing learning area essence statements and purpose statements for each phase of learning | 37 |

Figures

| | |
|--|----|
| Figure 1. Whakapapa (casting on)..... | 27 |
| Figure 2. Aho Tapu (the first row) | 27 |
| Figure 3. Ahorua (double threads)..... | 28 |
| Figure 4 Overview diagram..... | 31 |
| Figure 5 The interrelationships between ‘know do and be’ | 35 |

Overview

There is considerable international debate about how best to reshape national curricula in the face of rapid societal and environmental changes. The OECD is actively exploring this question through its *Future of Education and Skills 2030* initiative. Their aim is to 'help education systems determine the knowledge, skills, attitudes, and values students needed to thrive in and shape their future.'¹ Here in New Zealand, our government recently announced a 'curriculum refresh' in response to gathering pressures to be more deliberate in how we educate our young people for the complex and uncertain futures that await us all. It is in this context that the Ministry of Education asked the authors to outline a progression approach to curriculum design, within a bicultural curriculum.

Part 1 outlines the purpose of a national curriculum and where we have come from. It then describes what a curriculum progression framework is, and how curriculum progression frameworks can be used within a refreshed New Zealand Curriculum (NZC).

Part 2 explores the implications of developing a bicultural national curriculum and discusses both the curriculum entitlement for Māori learners and the bicultural entitlement for all learners.

Part 3 interrogates the principles of the current curriculum (NZC) to identify the broad shifts that need to occur to achieve the twin goals of developing a progression focused bicultural curriculum.

Part 4 introduces the idea of a system that learns² and discusses what we have learned since the NZC was introduced in 2007.

Part 5 presents an extended metaphor that draws the threads of Parts 1-4 together to convey our understanding of how elements across current curriculum refresh initiatives might work together, to form the basis of a progression-focused, bicultural curriculum. Implications for the design process are elaborated as the metaphor is worked through.

Part 6 considers ways to structure a progression-focused bicultural curriculum. We propose that the refreshed NZC replaces curriculum levels with learning phases (taumata ako) and that new purpose statements (tauākī ako) are developed to carry the high-level curriculum story coherently across the phases of learning.

¹ <https://www.oecd.org/education/2030-project/>

² See Ministerial Advisory Group Report on Curriculum, Progress, and Achievement.

Part 1: A Progressions Approach to Curriculum

Part 1 outlines the purpose of a national curriculum and where we have come from. It then describes what a curriculum progression framework is, and how curriculum progression frameworks might be used within a refreshed New Zealand Curriculum.

What is the purpose of a national curriculum?

A national curriculum sets the aspirations for learning for a nation. It captures society's vision for its young people. The purpose of Aotearoa New Zealand's national curriculum is to inspire and guide the kind of learning that will enable our young people to be confident, connected, and actively involved members of society; the kind of learning that will support our young people and their communities to thrive. It intends to do this by being clear about the knowledge, understanding, competencies, and dispositions that we believe really matter for life in, and beyond, Aotearoa and that every ākonga is entitled to.

A key design consideration in refreshing our national curriculum is the need to enable schools and teachers to understand and give effect to national aspirations, while at the same time providing enough flexibility for schools to be responsive to what their ākonga, whānau, iwi and community see as important.

Where have we come from?

We have had a focus on equity and students' entitlement to experience a broad and balanced curriculum since 1936 when Fraser asserted that schools were expected to 'offer courses that are as rich and varied as the needs and abilities of the children who enter them'.³

Society's views about what knowledge is valued and what makes a successful school leaver have changed over the years. Our national curriculum has also been structured in various ways to support schools and teachers with the enduring problem of how to address inequities and achieve the best possible outcomes for *all* ākonga.

From 1961-1986 expectations for teaching and learning in NZ schools were provided through content-focused syllabuses, guidelines, and supporting textbooks, which were prescriptive about the content teachers should teach and the time they should take to teach it. A successful school leaver was seen as someone who had mastered enough subject content to pass exams and gain entry to tertiary education. The learner's role was to absorb knowledge and demonstrate how much they had retained through tests and assessments. The idea was that this stored knowledge would be useful later in life.

The 1980s saw the development of a draft of our first national curriculum. This draft curriculum supported schools and their communities to see their programme of teaching and learning as a whole. It included "learning outcomes for balanced programmes for Junior Primary through to Senior Secondary" and five bands/levels to describe progress: junior

³ <https://nzhistory.govt.nz/culture/children-and-adolescents-1940-60/education>

primary, middle primary, senior primary, junior secondary, and senior secondary.⁴ However, the work did not proceed beyond a draft document (published 1988 as *National Curriculum Statement: A Discussion Document for Primary and Secondary Schools (Draft)*), as it was side-lined by the reform of the administration of education in 1989 and by a change of government in 1990.

Curriculum development resumed in 1991 and New Zealand shifted to an outcomes-focused curriculum design under the banner of the government's '*Achievement Initiative*'. A successful school leaver was seen as someone who had the capability to use and apply their knowledge and someone who was 'ready, willing and able' to carry on learning for life. The learner was expected to take an active role in making meaning; learning from and with others; and use their knowledge to solve problems—often as they arose. The Achievement Initiative was also a response to the ongoing problem of achieving more equitable education outcomes, this time expressed as the need to 'raise achievement and reduce disparity'. It was thought that a focus on outcomes would lead to more equitable patterns of achievement because it would give schools the flexibility to try different approaches to teaching, while keeping a focus on the outcomes that mattered.

Key design principles that influenced our outcomes-focused curriculum included:

- clarity of focus: focus curriculum design on what society wants students to demonstrate successfully at the end of their time at school
- design down: design curriculum back from society's aspirations for young people
- high expectations: design so that **all** students are able to do significant things well at the end of their schooling
- expanded opportunities: provide students with many opportunities to learn and enable them to demonstrate their learning in different ways.

As a country, we also took a unique approach to curriculum design by developing dual curricula to reflect the distinct Māori-medium and English-medium pathways. While the two curriculum documents were both outcomes focused and, in many ways, directly reflected each other, there were also some important distinctions. Most importantly, they signalled a commitment to recognising the obligation of our country to honouring the dual heritage of our nation.

This dual-curricula approach was retained when the national curriculum was revised in 2007. In 2007, the NZC as we know it today was born, with its overarching vision, and description of the essential nature of each learning area. Learning areas remained divided into eight levels with each level made up of achievement objectives that outlined what was to be achieved. The levels were only loosely associated with years at school as it was expected that, within any classroom, students would be working at a range of levels and progressing at their own pace.

It is now early 2021 and the direction in which a refreshed national curriculum might evolve is becoming more apparent. The recent Kōrero Mātauranga | Education Conversation captured 43,000 New Zealanders' hopes and aspirations for our young people and this information will be used to help re-shape our society's vision for ākonga. In addition, the prototype recently

⁴ Smaill, E. & Darr, C. (2020/unpublished). An examination of the curriculum-levelling construct. New Zealand Council for Educational Research.

developed for the draft Aotearoa New Zealand’s histories curriculum signals a move from an outcomes-focused curriculum to a progression-focused curriculum. The following sections of the paper consider the implications of such a shift across the whole curriculum.

What’s different about a progression-focused curriculum?

A progression-focused curriculum provides a big picture view that helps ākonga and all those who support their learning to look forward. It does this by signalling a commitment to a horizon that captures society’s vision for ākonga and by describing significant signposts or ‘waypoints’ that are typical of increasing sophistication, in the ways in which ākonga knowledge, understanding, and capabilities grow and deepen over time.

A progression-focused curriculum differs from our current outcomes-focused curriculum in several key ways. These are outlined in the table below.

Table 1 Differences between a progression-focused and our current outcomes-focused curriculum

| A Progression-focused Curriculum | Current Outcomes-focused Curriculum |
|---|--|
| Provides a coherent overview of how knowledge and competencies grow and deepen over time to enable meaning making and sophistication of understanding. | Signals outcomes in learning areas that grow in complexity, but does not necessarily signal how important competencies grow and deepen over time. |
| Written descriptors, indicators and exemplification supports teachers to ‘unpack’ how learning might unfold for students over time. | Achievement objectives describe key learning outcomes in terms of what students should know and do, in each learning area, at each of 8 curriculum levels. |
| Written descriptors provide clarity about progress expectations for each phase of learning and ‘worry points’ are signalled so that ākonga and those who support their learning can focus forward. | Curriculum Levels are loosely connected to year levels, acknowledging that ākonga learn at different rates and that the curriculum needs to be personalised to meet the needs of each learner. |
| Understanding, competencies, and values are described and the way they weave with each other is explained and illustrated in the curriculum itself. | Competencies and values are described separately. The curriculum indicates to teachers that they should be woven throughout the curriculum, but how they should weave is not made explicit. |
| Provides a continuity of learning expectations at different ‘grain sizes’ all explicitly aligned and designed back from an overall vision of what learners will need for their lives beyond school. | Provides continuity in each learning area by designing backwards from desired learning area exit outcomes. |
| Describes significant learning steps which may vary in distance from one another. | Outlines objectives at eight (8) evenly spaced levels. |
| Is clear about what teachers should look for (including worry points – indicators of barriers to progress) at specific points along a learning pathway. | While some achievement objectives are seen as more complex and therefore more significant it is not easy for teachers to identify the objectives that are more significant, so does not easily convey priorities for learning. |

| | |
|--|--|
| Steers teachers and learners toward progressively challenging concepts and contexts that must or could be explored and signals increasing complexity in the design of rich opportunities to learn. | Outcomes are seen as the most important curriculum element; the contexts learners explore to achieve these are seen more as a means to an end rather than integral to the intended learning. |
| Provides clear signals about the sorts of dispositions students need and deliberately weaves them into progressions | Names important dispositions but leaves them at a generic level. Seems to assume that strengthened dispositions will follow growth in conceptual understanding. |

Why develop a progression-focused curriculum?

What are the grounds for asserting that a progression-focused curriculum might be more effective in:

- inspiring and guiding the kind of learning that will enable our young people to be confident, connected, actively involved members of society?
- helping us to achieve more equitable outcomes for ākongā?

A number of arguments for this type of shift are apparent in the research literature:

A progression approach supports the provision of equitable opportunities to learn by providing clarity about the learning that cannot be left to chance and about appropriate progress expectations, while at the same time providing the flexibility for iwi and community to bring and share what they value.

A progression approach focuses forward unlocking each child's next learning steps. This provides more concrete support for the assessment-for-learning pedagogies and practices that shape further learning opportunities.

A progression approach enables the curriculum to be built on a strong bicultural foundation. One of the underlying ideas behind a progression approach is ensuring that our young people's identity, language, culture, and capabilities do not remain untapped and underdeveloped in teaching and learning contexts. (Who are our young people as human beings and what is the deep potential that lies within them that our education system should be honouring and fostering?)

A progression approach supports quality teaching by supporting teachers, ākongā, and their whānau to focus their interactions and have learning conversations about where ākongā are now, where they are going, and new possibilities. They support teachers as they make decisions about why to teach, what to teach, and when to teach it.

A progression approach supports teachers to prioritise the numerous possible foci of their efforts to **reflect on their practice** and inquire into and improve their impact because it provides clarity about what teachers should look for at specific points or signposts along a learning pathway.

A progression approach can empower ākongā by supporting each learner's personal experience of progress and their sense of themselves as a person and a learner. Making meaningful progress in something important is one of the most motivating things a learner

can experience. Experiencing progress also supports ākongā wellbeing and sustains their belief in their own agency and on-going ability to learn.

A progression approach reduces cognitive load for teachers by ensuring signposts for 'getting better' are holistic and weave together big ideas, aspects of the key competencies, and values and learning dispositions. This helps ensure a focus on in-depth learning of significant things, rather than superficial learning about things of little consequence.

A progression approach provides a useful language for communicating ākongā progress within and between schools and can enable efficient and targeted use of limited resources to develop tools to support teaching, learning, and assessment.

All the arguments point to the importance of providing stronger decision-making support for teachers and school leaders.

Features that curriculum progressions should show

There is an extensive body of international research on learning progressions, including several meta-analyses of multiple projects.⁵ Below, we outline seven important features of learning progressions highlighted in the research literature that we believe are relevant to a curriculum progression framework designed in 2021.

Curriculum progressions can involve varying 'grain size'

One notable feature of the international research is that progressions can vary considerably in 'grain size'. Some are very detailed, addressing the development of one or a small number of related concepts. These sorts of progressions are too fine-grained for national curriculum-building purposes. Teachers would be overwhelmed and the intention to provide more support would be jeopardised. They can, however, be useful supports for teaching and learning in the classroom, especially if they illuminate specific learning challenges that might hold students back from making progress. One caution is that more specifically focused progressions might promote a 'fix-it' type of approach to learning.⁶ Here the interest is in quickly diagnosing and correcting a student's misconceptions. There is a risk that, in the process of 'fixing it', the longer-term aim of developing robust understanding and capabilities is forgotten.

Some New Zealand researchers have had considerable experience with building progressions with a bigger grain size. These are more useful for national curriculum purposes. Examples include the Learning Progressions Framework⁷ and the 'transition capabilities' developed for the Local Curriculum Coherent Pathways Tool.⁸ Experience in building these tools suggests that it would be counterproductive to develop too many progressions overall. Descriptions of progress need to bring multiple curriculum elements

⁵ For example: Duschl, R., Maeng, S. & Sezen, A. (2011). Learning progressions and teaching sequences: a review and analysis. *Studies in Science Education*, 47 (2), 123-182.

⁶ Duschl, Maeng, & Sezen (2011) discuss this idea.

⁷ <https://curriculumprogresstools.education.govt.nz/lpf-tool/>

⁸ <https://curriculumtool.education.govt.nz/en/Home/PathwaysGuidance/99200>

together to describe meaningful waypoints, signposts, or milestones.⁹ For example the transition capabilities developed for the Coherent Pathways tool brought together aspects of key competencies with relevance across multiple learning areas.

Big picture curriculum progressions attend systematically to how the knowledge and skills within a domain develop from novice to expert performance. The development of important concepts and practices is threaded from less sophisticated to more sophisticated stages. Clear connections are made between what comes before and what emerges after each of the different learning waypoints.

Curriculum progressions recognise that learning does not always proceed in the same way

Curriculum progressions recognise that learning does not always proceed in the same way for all learners. Sometimes researchers talk about the “messy middle” in progressions where the trajectories learners take from early to more sophisticated understandings can be idiosyncratic. Sometimes, learners can appear to perform at different levels within a progression when completing similar tasks.

While it would be cleaner if a student could be placed at a specific level, student thinking is not as clean as levels may suggest. It is more likely that students exhibit a more prominent level than the other nearby levels, but students are typically going to perform at multiple levels at any given point in time (Huynh & Gotwals, p.6).¹⁰

It will be important that descriptors in any one progression signal important milestones that all ākonga should reach. However, the learning that happens between milestones is not linear and each student will make progress in their own way. The challenge is to support teachers to be responsive to diverse learning responses, without being too prescriptive.

Research evidence is used to inform curriculum progressions and to improve them

Research evidence is a key part of developing curriculum progressions. Researchers use a variety of methods to generate this evidence, including cross-sectional and longitudinal studies looking at how concepts and practices develop over time and in different instructional settings. There are few, if any, broad learning areas where the research is rich enough to inform all the aspects of a multi-year progression. This means the research is supplemented with knowledge from teachers and others with deep experience of the learning area.

Curriculum progressions are usually developed around anchor points

The development of a curriculum progression usually starts by defining a top and bottom ‘anchor’. When defining an anchor, research that looks at what students are capable of when provided with appropriate learning opportunities is also taken into account. The top anchor

⁹ Learning Progressions in Curriculum Design Douglas S & Thomas G (2018)

¹⁰https://www.researchgate.net/profile/NiemHuynh/publication/271567712_A_Road_Map_for_Learning_Progressions_Research_in_Geography/links/557a582e08aeb6d8c020600a/A-Road-Map-for-Learning-Progressions-Research-in-Geography.pdf

defines a horizon for learning. Top anchors usually describe the desired state we want students to reach and are often structured around core concepts in the learning area (the big ideas). Bottom anchors are often designed to recognise the kinds of knowledge and experiences that students have when they begin their schooling journey.

Progression depends on purposeful and rich learning opportunities

Appropriate instruction and opportunities to learn are key to making progress. A framework that includes the features outlined above can provide a map for teachers that helps focus learning programmes. Sometimes learning progressions are supported by teaching progressions that provide examples of rich, meaningful activities that promote progress.

Curriculum progressions in one domain can interact with progressions in another domain

Learning in one learning area can interact with and reinforce learning in other areas. For instance, progression in science is affected by progression in mathematics. This means that learning progressions are at their most powerful when they are coordinated and mutually reinforcing across the curriculum.

Curriculum progressions emphasise progression and development

Curriculum progressions emphasise where a student is on their learning journey and the progress they are making, rather than whether they have achieved (passed or failed) a standard. Margaret Heritage¹¹, who is a well-known educational researcher, comments that they also help teachers think about learning in terms of growth and “increasing sophistication” instead of just covering content. A clear view of progressions that outline criteria for success is seen as an important ingredient in formative assessment.

Part 2: A Bicultural Approach to Curriculum

This section outlines reasons for developing a bicultural curriculum. It discusses both the curriculum entitlement for Māori learners and the bicultural entitlement for all learners.

In the last 20 years or so, Aotearoa New Zealand has made some bold strides in curriculum development and design with two documents—Te Marautanga o Aotearoa and The New Zealand Curriculum—sitting side by side as our national curriculum. While this design has given recognition and support for the dual language and cultural pathways offered through our compulsory schooling system, a curriculum must keep evolving if it is to continue to meet the aspirations of learners and their whānau and support the education success of all learners in a global world.

¹¹ Heritage, M. (2008). Learning progressions: Supporting instruction and formative assessment. Paper prepared for the Formative Assessment for Teachers and Students, State Collaborative on Assessment and Student Standards of the Council of Chief State School Officers.

Why develop a bicultural curriculum?

A bicultural NZC serves two purposes:

- promoting equity in the benefits that Māori learners gain from the curriculum
- upholding the right of all learners to become bicultural members of society.

In the founding document for our nation, the three key principles of Te Tiriti¹², guide us on how we should do things as a country, including how we should educate our children. As a country, we have an obligation to uphold the Treaty principles of participation, protection, and partnership.

At the heart of these principles are core tenets such as acting in good faith, honourably and reasonably, and ensuring that Māori learners have equal access to, and gain mutual benefit from the curriculum. This means that Māori learners have the right to be active participants in the schooling system, that mātauranga Māori (including Māori culture and language) is actively protected, and that whānau, hapū, and iwi are equal partners in education. These obligations and commitments have implications for the national curriculum. As we learn more about what these principles and tenets mean for education and schooling, we have a duty to do better.

Curriculum entitlement for Māori learners

While the current iteration of the NZC makes a commitment to identity, language, and culture as the foundation of education success, as a group, Māori students have continued to experience poorer outcomes and engagement than their non-Māori counterparts. The current curriculum has not always supported success for Māori children/learners (cf. the principle of participation), nor has it required the active building of equal partnerships which support equal rights and input of Māori (cf. the principle of partnership). Further, giving recognition and status to mātauranga Māori has continued to be optional in the national curriculum (cf. principle of protection). These things have meant that Māori learners have not had equal access to the curriculum, learning, and success.

At a national level, therefore, in order for the principles of Te Tiriti o Waitangi to be upheld, our curriculum and its delivery needs to better reflect our bicultural society and the values, perspectives, opportunities, and demands of the Aotearoa New Zealand context in which it is situated. In terms of a national progressions-framework, the contexts for learning are important—they must allow for meaningful learning experiences that Māori learners can engage with. We need to direct attention to mātauranga Māori, i.e., to the distinct body of knowledge and awareness held by Māori (reo: language, ahurea: culture, tuakiritanga: identity). Importantly, the progressions must also recognise and provide for the kinds of success valued by whānau, hapū, and iwi.

¹² Principles of the Treaty <https://waitangitribunal.govt.nz/treaty-of-waitangi/principles-of-the-treaty/>

Bicultural entitlement for all learners

Children in Aotearoa New Zealand have a right to learn about and be comfortable with the dual heritage of our nation. This has been a long-held understanding and commitment in early childhood education in Aotearoa New Zealand. To that end the ECE sector has developed a curriculum specifically to honour both cultures.¹³ *Te Whāriki*¹⁴ provides a positive foundation for curriculum development in Aotearoa New Zealand off which the national school curriculum can springboard in order that children have the opportunity to continue growing and learning in a bicultural context.

Being bicultural supports learners to bring unique and diverse perspectives to a situation and engage with others from a position of understanding of identity, language, and culture — the fundamental building blocks for human engagement. In our global world where technology plays an increasingly pivotal role, human capital has become particularly valuable. No longer is it sufficient to simply “know and do”. It is also about what and who we are, and the ways in which we enact what we know and can do. Knowledge and skills need to be moderated by human dispositions i.e., the attitudes, values, and social and emotional traits that enable us to work successfully and appropriately with others in ever more complex contexts.

Not only is it the right of learners in our country to feel comfortable in the two heritage cultures of our nation but being bicultural positions them positively to engage in a global world which requires them to enact a broader set of skills, knowledge, attitudes, and values.

Principle driven decision making

Decisions about how to frame progression in a refreshed bicultural New Zealand Curriculum need to be principle-driven. As a starting point for this thinking, feedback from the recent Kōrero Mātauranga¹⁵ and from the Curriculum Progress and Achievement Ministerial Advisory Group¹⁶ indicate that as we work to refresh the NZC we should consider designing a refreshed curriculum that:

- is clear in its vision, forward-looking and values wellbeing
- is clear about the stepping stones that lead to progress towards the overall purposes/goals/vision
- has a bicultural foundation and values mātauranga Māori (including reo and tikanga) as foundational
- is clear about ākonga entitlement and what’s most important while providing flexibility for local decision making that recognises the priorities, values, and aspirations of different iwi and communities

¹³ Chaffey, R., Conole, M., Harrington, M. (2017) <https://www.hekupu.ac.nz/article/bicultural-development-early-childhood-education-critical-reflections-and-humpty-dumpty>

¹⁴ Ministry of Education. (2017). *Te Whāriki. He whāriki mokopuna mō ngā mokopuna o Aotearoa. Early childhood curriculum*. Ministry of Education.

¹⁵ <https://conversation.education.govt.nz/>

¹⁶ https://conversation-space.s3-ap-southeast-2.amazonaws.com/ELS+0324+CPA+Final+MAG+report_06+includes+Ed+Strategy+vision.pdf

- is balanced in promoting cognitive, physical, aesthetic, cultural, creative, social and emotional development and ‘soft skills’ as equally important
- is holistic and inclusive in ways that recognise, affirm, and support the learning of ākonga of different identities, languages, cultures, abilities, and talents
- is relevant and appropriately challenging, and provides ākonga and their whānau with opportunities for making informed choices
- provides learners with coherence and continuity across transitions.

These considerations are not at odds with the eight current NZC principles which were designed to “underpin all school decision-making” and to “put students at the centre of teaching and learning” (NZC, p.9). Part 3 of the paper revisits current NZC principles and considers them through the lens of a progression focused bicultural curriculum.

Part 3: Revisiting the NZC principles

The principles of the current curriculum (NZC) are likely to be updated as part of the curriculum refresh process. A refreshed, progression-focused NZC provides the opportunity to revisit our understanding of the current principles. In what follows, we consider how each of the eight principles might be reframed to provide guidance for a progression-focused bicultural curriculum.

Principle 1: Treaty of Waitangi

It is important to be clear about what a commitment to a bicultural curriculum means for the development of new models of progression. Hence, the Treaty of Waitangi principle is positioned first in this discussion to ensure that it is kept front-of-mind as the other NZC principles are revisited. At the moment, the only specific guidance offered by this NZC principle is that “all students have the opportunity to acquire knowledge of te reo Māori me ōna tikanga” (NZC, p.9). This now seems like a rather weak signal, especially given evidence that schools interpret the obligation to teach te reo differently and efforts to honour this principle can too often be superficial.¹⁷

There are two ongoing challenges when referencing the Treaty of Waitangi. First, the Māori and English texts convey different understandings of its meaning. Second, the Treaty’s commitments now need to be applied in contexts that could not have been envisaged when it was signed. In response to these challenges, groups working with the Treaty look to its principles rather than the literal text. It is important to note that many more principles are implied than the well-known ‘3Ps’ (partnership, protection, participation). The Waitangi Tribunal has teased out the premises underlying concepts such as kāwanatanga and tino

¹⁷ NZCER’s National Surveys have asked about this from time to time. In 2019, the survey reported that most English-medium primary and intermediate schools used te reo in daily life in a limited way—for example as greetings or simple instructions. Very few provided regular sustained learning opportunities. See: <https://www.nzcer.org.nz/system/files/NZCER%20National%20Survey%20Primary%202019%20Summary.pdf>

rangatiratanga in the Māori version of the Treaty to arrive at an expanded set of tenets for their work, such as the duty to act reasonably, honourably, and in good faith; reciprocity; and mutual benefit.¹⁸

With an expanded list of principles in mind, at a minimum, a bicultural approach to the progressions framework would:

- give breath to all the existing NZC principles
- value mātauranga Māori (including reo and tikanga) as foundational
- support local decision making and recognise differing priorities, values, and aspirations
- support power-sharing of information/data
- include supporting materials that model these preconditions across the curriculum.

The commentary on the other seven principles has been written with these preconditions in mind.

Principle 2: Community engagement

The community engagement principle implies the need for meaningful engagement with families, whānau, and the wider community. Engagement is intended to ensure that the curriculum “has meaning for students, connects with their wider lives, and engages the support of their families, whānau, and communities” (NZC, p.9). One obvious implication for the design of new progressions is that they should be written with sufficient clarity that they make sense to everyone who supports students in their learning. Narrow, technical specifications will not meet this brief.

Given the intention to ensure mātauranga Māori is an integral part of the curriculum, developers should engage with mātauranga Māori experts (or with whānau, hapū, and iwi) to explore or understand the mātauranga Māori that they value and see as important, would like to see all ākonga learn, and how it might be meaningfully included in the curriculum. The curriculum developers should also consider how mātauranga Māori might be taught so that all ākonga have the opportunity to develop biculturally. The implications that flow from this principle are that progressions should:

- be relevant and meaningful for ākonga from both cultures
- be clearly and simply expressed so that their meaning can be readily understood
- draw on the expertise of those who hold deep knowledge of mātauranga Māori
- be sufficiently flexible to allow for local curriculum-building.

Principle 3: Coherence

In NZC this principle implies two types of coherence. One is that links should be made across the breadth of curriculum subjects. The other is that the curriculum should allow for coherent

¹⁸ A Guide to the Principles of the Treaty of Waitangi as expressed by the Court and the Waitangi Tribunal. <https://waitangitribunal.govt.nz/treaty-of-waitangi/principles-of-the-treaty/>

transitions between stages of schooling. Coherence also has other implications for the development of progressions. Progressions can and should focus on the way that knowledge is structured within one discipline. In the research literature this is called canonical coherence.

Progressions also need to take account of the overall coherence of each student's learning experiences. They provide signals about what to look for, in the form of clear and easily understood pictures of key markers of learning. Teachers and ākonga are empowered to unlock the next learning phase, and to focus attention on what the ākonga can do and their attitudes and dispositions towards using their learning.

With coherence in mind, learning progressions should:

- outline how important constructs develop over time
- provide clear signals about how knowledge, concepts, and skills within a domain develop from novice to expert performance. (One learning progression might attend to several constructs)
- broadly indicate the trajectory that ākonga take as they move from novice to expert
- make clear connections between what comes before and what emerges after the different points in the progression.

Principle 4: Learning to learn

Learning to learn was a comparatively new focus when NZC was developed, and the definition of this principle is rather circular. With hindsight, we think there are strong links between the original intention and Assessment for Learning (AfL). AfL is distinguished from other models of formative assessment by the active involvement of ākonga in conversations about the meaning of their achievements, and the implications of any assessment feedback for their next learning steps.¹⁹ It follows, that conversations about their learning experiences need to support ākonga to see how to go forward with their next learning steps.

It will be important to develop progressions that produce constructive support for working with students' current understandings and abilities, while also conveying a 'big picture' view of where learning might be headed across their time at school. This strongly implies a 'work with it' model of progression where teachers use the guidance provided by progressions to take students' learning forward from their current understandings and abilities.

Aromatawai is an approach to making judgements about progress used in Māori-medium schools. The practices that fit with an aromatawai approach look very much like those that support assessment for learning.²⁰ Aromatawai is guided by four principles: Mana mokopuna, education that is mokopuna-centred; Rangatiratanga, education that is unique to the

¹⁹ The DANZ report used to term "assessment capability" to draw attention to the importance of actively building knowledge, skills and dispositions to work with assessment feedback:
<https://assessment.tki.org.nz/Research-and-readings/Research-behind-DANZ>

²⁰ Hunia, M. (2019). Whāia kia tata: He aromatawai i roto i ngā kura. New Zealand Council for Educational Research. This is an unpublished report on how aromatawai is understood and applied in kura.

individual; Toitū te mana, education that affirms whānau, hapū, iwi; and Whanaungatanga, education that values whanaungatanga. The four principles overlap and are often reinforced by locally developed principles pertinent to different settings.

Both aromatawai and AfL imply a need to consider how supportive conversations about learning are impacted by the manner in which judgements are made. The progressions literature conveys clear messages that ākongā should not be measured against narrow indicators focused on an arbitrary final point in time.²¹

Further implications that follow from the learning-to-learn principle are that progressions should:

- adopt a developmental perspective
- take a bigger grain size and avoid narrow 'level' labels
- clearly convey the expectation that learning progress will not be linear and that each learner will follow their own learning trajectory between key waypoints
- support ākongā to actively participate in monitoring and regulating their own learning.

Principle 5: Future focus

As it stands, the future focus principle draws attention to future-focused topics that should be included in students' learning. With hindsight, an opportunity was missed to develop the idea that the purposes envisaged for learning should support students to be and become the people they are capable of being and aspire to be.

The key competencies imply a focus on being. They are defined as "capabilities for living and lifelong learning" (NZC, p.12). However, to achieve this ideal, key competencies need to be woven together with the more familiar 'content' elements of the curriculum. This weaving should result in coherent learning experiences with both current and future goals in mind.²² A weaving approach to the development of a coherent curriculum was first explored via the prototype 'science capabilities.'²³ The idea subsequently underpinned the development of capabilities for use in the Coherent Pathways tool.²⁴ Given that capabilities bundle multiple elements together to succinctly describe broad, complex curriculum goals, they could provide a way of thinking about how to shape significant signposts in the development of progressions. They should allow for broad developmental differences as students grow and

²¹ Paul Black, who is well known for his AfL work, says that we should assess the development of student understanding of particular concepts and skills over time, as opposed to making a single measurement at some final or supposedly significant time point. He calls this a "developmental perspective": Black, P., Wilson, M., & Yao, S.-Y. (2011). Road Maps for Learning: A Guide to the Navigation of Learning Progressions. *Measurement: Interdisciplinary Research & Perspective*, 9(2–3), 71–123. <https://doi.org/10.1080/15366367.2011.591654>

²² See McDowall & Hipkins, 2019, for an analysis of different ways teachers have understood the role played by key competencies in NZC: <https://www.nzcer.org.nz/research/publications/key-competencies-insights>

²³ <https://scienceonline.tki.org.nz/Science-capabilities-for-citizenship/Introducing-five-science-capabilities>

²⁴ <https://curriculumtool.education.govt.nz/en/Home/PathwaysGuidance/99200>

mature intellectually, socially, and practically. The purposes that are envisaged for learning could be more clearly aligned with these developmental differences.²⁵

There are noticeable differences between the 'front ends' of NZC and TMoA. In the NZC, the front end presents key competencies, but has no graduate profile, while the TMoA includes a graduate profile but weaves competencies through the learning areas. Each kura is expected to engage its community in designing a graduate profile that describes who they want their young people to be and what they want them to be capable of. Aspects of this profile could be seen as 'upper anchors' of implied progressions.

Further implications of the future focus principle are that progressions should:

- convey clear signals about the immediate purpose and importance of learning, and where it might take ākongā in their futures
- model the weaving together of the diverse elements of the curriculum (including knowledge, skills, and dispositions).

Principle 6: Cultural diversity

The cultural diversity principle currently sets an expectation that the curriculum reflects the cultural diversity of New Zealanders and values the histories and traditions of all its people. It does not explicitly say that there is an obligation to develop and teach a bicultural curriculum. Like the guidance given around the NZC Treaty of Waitangi principle, this seems like a weak signal in 2021.

Teachers cannot work with students' ideas if they do not have a basic knowledge and understanding of their lives in context. Nor can teachers expect to engage ākongā effectively if their practice is not culturally responsive. This further reinforces the need to develop progressions that inspire an appropriate pedagogy, and which are broad enough to take account of diverse life experiences, with a specific focus on mātauranga Māori. Mātauranga Māori should be reflected in new learning progressions, with the caution that this should not be done in a token way. Meaningful engagement with whānau, hapū, and iwi will be needed to ensure this is done in an empowering and authentic way.

If done well, this approach will signal the really key aspects and ideas that all ākongā should have the opportunity to learn, and how a learning area serves our overall vision for ākongā, without getting bogged down in detail.

Further implications for the work to develop progressions are that:

²⁵ As part of a wider discussion about the future of science education, Bull et al (2010) argued that the main purpose of science learning should be framed developmentally. In the primary years (1-6) the emphasis should be on stimulating students' interest and curiosity, and in developing literacy skills. In the middle school (years 7-10) the emphasis should be on socio-scientific issues, with an additional focus on increasing students' awareness of the possibilities of future careers in science. In years 11—13 students could continue to study an issues focused programme but they could also take courses in either pure or applied science that are more focused on preparation for careers in science. <https://www.nzcer.org.nz/system/files/inspired-by-science.pdf>

- the process should begin with the identification and clarification of a small set of big ideas in each learning area
- supporting materials should model different contexts in which each big idea might be meaningfully developed
- the overall process should draw on the practical wisdom of highly experienced teachers who are closely in touch with the diverse needs of students.

Principle 7: High expectations

The high expectations principle makes clear that it is important for both national and local curriculum to support and empower all students to learn and achieve personal excellence, regardless of their individual circumstances. This principle is in line with research on teachers' expectations—the beliefs, attitudes, and practices of high expectation teachers are pervasive in their effect on students' learning and progress.²⁶ It is an important principle to re-focus on given indications that teachers too often underestimate Māori learners' potential.²⁷

Further implications for the work to develop progressions are that:

- progressions should prompt teachers to notice excellence in relation to nationally agreed aspirations as well as in learning that is unique to a particular learner, and the aspirations of their whānau, and their community.
- a progressions framework should reflect aspirations for excellence in the system as a whole while supporting teachers to expect excellence for individuals and groups of learners
- high expectations should be held for all components of the framework, for example for what students know, do, understand, and be like. High expectations just for what students do would not be sufficient.

Principle 8: Inclusion

The inclusion principle in NZC makes explicit that curricula in Aotearoa should be non-sexist, non-racist, and non-discriminatory. A curriculum should ensure that students' identities, languages, abilities, and talents are recognised and affirmed and that their learning needs are addressed. Such inclusion should be evident in the policies and documents that convey the curriculum, and in the experiences that draw on it.

The inclusion principle gives rise to several implications for work in developing progressions:

²⁶ Rubie-Davies, C. M. (2008). Teacher beliefs and expectations: relationships with student learning. In C. M. Rubie-Davies, C. Rawlinson (Eds.) *Challenging thinking about teaching and learning* (pp. 25-39). New York, NY: Nova Science Publishers Inc.

²⁷ Rubie-Davies, C. M., & Peterson, E. R. (2016). Relations between teachers' achievement, over- and underestimation, and students' beliefs for Māori and Pākehā students. *Contemporary Educational Psychology*, 47, 72-83. 10.1016/j.cedpsych.2016.01.001

NOT GOVERNMENT POLICY

- the content of a progression framework should be checked not only to ensure that what is included is non-sexist, non-racist, and non-discriminatory, but also to ensure that what is left out does not breach this principle
- processes used to develop a progression framework should ensure that stakeholders with diverse identities, languages, abilities, and talents are involved and their ideas reflected in the framework itself
- attention needs to be given to the accessibility of the progression framework - its presentation, language, and mode.

Part 4: An evolving curriculum: what else have we learned?

In 2019, the Ministerial Advisory Group on Curriculum, Progress and Achievement (MAG-CPA) proposed the notion of 'a system that learns'. The report reminded us that improving equity is a 'wicked problem' in the sense that it is complex, enduring, and requires multiple solutions.²⁸

One of those solutions focuses on the curriculum itself. In the same way as schools and teachers seek progress for learners, we also need to focus on how the national curriculum itself can progress. Part 3 started this process of reflection by revisiting the NZC principles with the dual aims of the curriculum refresh in mind. In Part 4, we now explore what else we might learn from our experiences with NZC, in order to develop a robust progressions-based bicultural curriculum. Our aim is to retain the best of the NZC while also learning from what has not worked so well in practice.

Curriculum as a useful tool for schools and teachers

A curriculum is an important tool in, and for, the education system. Since 2007, we have learnt that to be more fit for purpose, a refresh of the NZC needs to address issues of:

- clarity
- completeness
- aspirations, priorities, and realistic content
- ākonga entitlement
- mātauranga Māori
- knowledge-building practices
- consistency
- empirical basis.

Clarity

We've learnt that teachers need a clear curriculum that provides better signals to support learning; including how to work with the knowledge students from different cultures bring to their learning at school, and particularly, how to support progress for Māori students.

Curriculum priorities are currently unclear because they are described in multiple places, creating a sense of curriculum clutter and overload. Coupled with curriculum levels that are 'fuzzy', and which mean different things to different teachers, this results in variable expectations for learners.

Current Achievement Objectives are also considered to be too many and too vague; and the Essence Statements associated with the learning areas too light. They do not make clear enough the disciplinary knowledge²⁹ and competencies that are important for all ākonga and

²⁸ <https://conversation.education.govt.nz/conversations/curriculum-progress-and-achievement/>

²⁹ McPhail, G., & Rata, E. (2016). Comparing curriculum types: 'powerful knowledge' and '21st century learning'. *New Zealand Journal of Educational Studies*, 51(1), 53-68.

that, therefore, need to be deliberately included in curriculum design, and noticed in ākongā learning.

A move toward greater curriculum clarity does not imply a swing to a fully prescriptive curriculum that reduces teachers' agency or disempowers schools as designers of local curriculum. In many contexts, schools and teachers currently thrive and serve their learners without a curriculum that clearly conveys expectations for progress. Those schools typically value the freedom to establish clarity for themselves and achieve impressive things with, and for, their learners and communities. But a national curriculum has a role in ensuring **all** learners benefit from the curriculum. Providing clarity will support those working in contexts where there is uncertainty about the relevant direction, pace, and steps to take, whilst allowing those that are already thriving to continue to use and improve their own approach to curriculum.

Completeness

We have learnt that, ideally, a curriculum should support educators' understanding of progression for all aspects for which it sets out aspirations. The NZC currently describes progress for only some of its aspirations; only some of the elements that comprise the curriculum. For example, while most learning areas set out a mode of inquiry that works for that learning area, what progress looks like in those inquiry modes is not made clear. As a second example, there is more emphasis on making progress in some learning areas, arguably at the expense of others. Arts educators, for example, say they struggle to find a place for their vital learning area in many school programmes.³⁰

Furthermore, while the NZC says that curriculum elements should be integrated (learning areas, key competencies, and values for example), what progression looks like for integrated elements is not made explicit. This is not surprising as working out what progression of integrated elements looks like is very challenging.³¹ Even just working out what integration itself looks like, and why it is important, is very challenging.³² The current NZC leaves this challenge almost entirely to educators in schools. Our system could learn from those in both English-medium and Māori-medium settings with insights into this challenge and share that learning for the benefit of ākongā across the system.

Priestley, M. & Sinnema, C. (2014). Downgraded curriculum? An analysis of knowledge in new curricula in Scotland and New Zealand. *Curriculum Journal*, 1-26. doi:10.1080/09585176.2013.872047.
<http://www.tandfonline.com/eprint/cEuEQnVbKGTBCvEfcP73/full>

³⁰ There is an extended commentary on this dilemma, set in the context of the COVID 19 crisis, here: <https://thespinoff.co.nz/art/27-06-2020/turning-stem-to-steam-how-to-turn-around-the-crisis-for-the-arts-in-schools/>

³¹ McDowall, S. & Hipkins, R. (2019). How the key competencies evolved over time: Insights from the research. New Zealand Council for Educational Research.
<https://www.nzcer.org.nz/research/publications/key-competencies-insights>

³² McDowall, S. & Hipkins, R. (2019). How the key competencies evolved over time: Insights from the research. New Zealand Council for Educational Research.
<https://www.nzcer.org.nz/research/publications/key-competencies-insights>

Aspirations, priorities, and realistic content

Our 2007 curriculum describes broad aspirations and wide-ranging possibilities for learners. The problem with this is that the NZC does not currently convey the priorities or critically important markers of progress that would help teachers make decisions about teaching and learning and where ākonga need further support.

It is also clear that the Treaty of Waitangi principle does not currently underpin all school decision-making because our aspirations for producing bicultural learners are not yet being realised. In addition, the principle of inclusion is not yet being realised because many ākonga Māori experience racism³³ in school, including feeling undervalued and underrated. Finally, it is difficult to know if students are achieving the breadth of aspirations signalled in NZC, or if those aspirations are realistic because there are no agreed ways of measuring all the outcomes NZ society deems important.

Ākonga Entitlement

The flexibility in the NZC and its emphasis on local curriculum design continue to be highly regarded by principals and teachers. NZC's flexibility allows schools and teachers autonomy to design local curricula that meet the needs and aspirations of their ākonga and communities. But we have learnt that the NZC does not currently provide sufficiently clear signals, from a national curriculum point of view, about the entitlements for all learners; the learning that cannot be left to chance for all ākonga across the country.

As one example, the National Monitoring Study of Student Achievement in Social Studies reveals that Māori students' attitudes to social studies decline between year 4 and year 8, and that Māori learners as an overall group also achieve less success than students from other groups in both year levels.³⁴ This pattern broadly applies across all NMSSA learning area monitoring. The issue of curriculum entitlement for Māori students is part of the equity problem highlighted by the 2019 MAG-CPA.

Guidance for building a local curriculum and associated progressions relies on achievement objectives that vary widely in scope. This has resulted in a great deal of variation in the opportunities our learners are given, the learning they experience, and what they come to learn from those learning experiences. Because the curriculum is highly flexible, teachers' strengths and areas of confidence and, conversely, weakness and uncertainty, play too big a part in determining what our learners do and do not experience. As a result, many ākonga are not accessing the learning or success they are entitled to.

³³<https://www.education.govt.nz/assets/Documents/our-work/f-MOE19458-Te-Hurihanganui-Blueprint-Full-PRINT.pdf>

³⁴ <https://nmssa.otago.ac.nz/reports/index.htm#7>

Valuing mātauranga Māori

We have also come to learn that our current Achievement Objectives do not acknowledge or value mātauranga Māori,³⁵ and insights from a range of sources show that our whole system is not valuing mātauranga Māori to the extent it ought. Our obligations to growing ākonga who are from, and of, Aotearoa New Zealand, coupled with our commitment to the principles of Te Tiriti o Waitangi, necessitate that we do better in this regard. While teachers can draw on contexts that resonate with mātauranga Māori as they work with the current curriculum, the Achievement Objectives themselves do not steer teachers to do that. The extent to which our learners experience mātauranga Māori is dependent on their teachers' inclination to embed it, rather than assured through what the curriculum itself sets out.

There is typically little emphasis on mātauranga Māori in local interpretation of curriculum. This is not surprising because we currently have Eurocentric Achievement Objectives and many teachers have only limited knowledge, understanding, and appreciation of mātauranga Māori. The recent development of the Aotearoa New Zealand Histories curriculum makes a significant contribution to addressing this issue. The next challenge is to also recognise the importance of positioning mātauranga Māori with status in all learning areas.

An emphasis on knowledge-building practices

When the NZC was developed there was little public awareness of the need for an explicit focus on “how we know what we know”. Social media were still in the future, but now the pernicious influence of false information is everywhere. Students need a more secure foundation for making judgements about what makes some types of knowledge more trustworthy than other types. Internationally, this emphasis is reflected in discussion of knowledge-building practices.³⁶

We have learned that the parts of the curriculum that focus on the ‘nature’ of knowledge need clear exemplification and support. In the NZC, this focus can already be seen in the emphasis on historical thinking practices; the Nature of Science strand; and on mathematical reasoning. However, research suggests that teachers need a lot of support to weave these elements together with traditional content, so that the focus on how we know what we know is better realised in practice.³⁷ The science capabilities were developed with this challenge in mind.

Moreover, we cannot safely juxtapose mātauranga Māori and Western knowledge systems unless, and until, most teachers have a broad understanding that these are actually different knowledge systems, with their own knowledge-building practices and ways of establishing

³⁵ Mātauranga Māori is “a distinctive knowledge created by Māori arising from their living circumstances, their worldview and their experiences.” Royal (2019).

³⁶ For example, in the USA the Common Core standards for assessing science include a set of “science practices”. <https://www.nextgenscience.org/>. In the OECD 2030 curriculum work, this element is called “epistemic knowledge”. https://www.oecd.org/education/2030-project/teaching-and-learning/learning/knowledge/Knowledge_for_2030_concept_note.pdf

³⁷ For example, the purpose served by the Nature of Science strand of NZC is not clear: Hipkins, R. & Hodgen, E. (2012). *Curriculum support in science: Patterns in teachers' use of resources*. New Zealand Council for Educational Research. https://www.nzcer.org.nz/system/files/Curriculum%20Support%20in%20Science_0.pdf

authority. At the moment Western knowledge tends to be taken for granted, creating an unconscious bias for many teachers.

Consistency across learning areas

Our system is well placed to improve coherence and consistency across our curriculum in ways that do not detract from the unique and important contributions each learning area makes. We have seen our curriculum itself progress—from a set of curriculum statements in the 1990s (each learning area with a separate document), to a single document in 2007 (all learning areas included). Bringing the learning areas together in 2007 has enabled us to see that there is not enough coherence across the curriculum as a whole. For example, the learning areas ‘do’ different things, use different language (or use the same language but with different meanings), or use different ways of organising themselves. Most importantly they represent progress quite differently.

These differences are not always explained by the nature of the learning area, but rather by a lack of coherence. We now have an opportunity to address this for the benefit of ākongā and the types of learning they will engage in.

The empirical base

An increasing body of information provides insights about how students make progress—the pathways or sequence of learning they are likely to move through, and the pace of progress through those pathways. Some of this information is derived from formal research³⁸ and some from less formal sources. These insights vary from being highly generalised (about progressions in mathematics or visual arts, for example) through to more specific (for example, progressions in learning about place value, or historical empathy, or a scientific concept).

While the progressions suggested from such empirical work are a) certain not to apply to each and every learner, and b) not necessarily available for all curriculum outcomes deemed important, their empirical basis means they are useful in generally understanding and predicting likely pathways through which students may typically move toward important curriculum aspirations. As such, they are a useful guide for designing a progression-focused curriculum. One important caution, however, is that the current empirical base is likely to reflect achievement patterns of ‘mainstream’ students. It should be used with caution if the refreshed curriculum intends to extend its accessibility and relevance to ākongā who come from diverse language and cultural backgrounds, or who demonstrate progress in alternative ways.

³⁸ For example the research that underpins the Learning Progression Frameworks in Literacy and Numeracy

Part 5: An Overarching Model for a Progression-focused Bicultural Curriculum

In Part 5, we present an extended metaphor that conveys our understanding of how the elements currently being explored in a range of curriculum refresh initiatives might work together to form the basis of a progression-focused, bicultural curriculum.³⁹ We bring the threads of Parts 1-4 together using the metaphor of a woven cloak (*kākahu*) and we discuss implications for the curriculum design process as the metaphor is worked through.

Nāu i whatu te kākahu, he taniko tāku | Conceptualising the model

The metaphor of a woven cloak (*kākahu*) is useful in several ways. First, it builds on from the conceptualisation of the early learning curriculum as a *whāriki* (mat), providing the foundation for learning. Children enter the schooling system with at least five years of experience and learning. This is their foundation or “whāriki” for schooling. There are some obvious connections between a *kākahu* and a *whāriki*. For example, they are both woven items which serve practical functions, and are created through the smart and effective intertwining of fibres. There are also some important distinctions between *whāriki* and *kākahu*, particularly in terms of the techniques, materials, and design used in their creation and the functions they serve. Te Whāriki, as our early learning curriculum sets in place a precedent for bicultural education that values and honours our dual heritage. As a *whāriki* it provides a foundation upon which our children can stand. The NZC, in its refreshed form, intends to build on that commitment to a bicultural approach to educating Aotearoa New Zealand’s children, and to support each *ākonga* to weave a cloak of achievement that they will wear beyond their schooling years.

Second, this metaphor also enables a progression-focused curriculum to be described in a coherent way that emphasises the critical interdependence of the various elements. It recognises the key players and the necessity for the framework to be functional and useful for all who will engage with it.

At a design and development level, the metaphor of a *kākahu* is also useful. A *kākahu* may take years to complete and involve several people in its design and making. An enormous amount of time and effort goes into the preparation of the fibres before the actual weaving begins.⁴⁰ While a weaver draws on traditional practices to design and create the garment, with each production they learn more and bring that learning forward. At times, weavers may use new materials or ideas to create contemporary garments. Most importantly, a weaver continues learning and trying to improve their skill, bringing forward learning from the past to create garments for the future. All these features hold relevance to improving and refreshing

³⁹ For an overview of the model see Figure 4, p 30

⁴⁰ Hetet, V. (2018). They’re not all korowai: a master weaver on how to identify Māori garments. The Spinoff, 26 April 2018. <https://thespinoff.co.nz/atea/26-04-2018/theyre-not-all-korowai-a-master-weaver-on-how-to-identify-maori-garments/>

curriculum. As we learn more, we have the capacity to do better. We can create more appropriate and coherent learning experiences and pathways for ākonga. Like the various stages and elements of the weaving process, learning progressions are at their most powerful when they are well prepared, focus on what is most important, coordinated and mutually reinforcing across the curriculum.

Ko te pae tawhiti, whāia kia tata | Vision

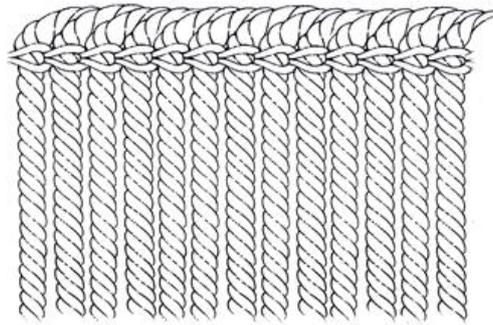
In a progression-focused curriculum, ākonga will weave their cloak, with the support of their whānau, and under the guidance of the master weaver, the teacher. In this case, the ākonga is both a weaver and the wearer of the cloak. As the expert or master weaver, the teacher uses their knowledge of curriculum and pedagogy to plan teaching and learning programmes that promote learner progress and achievement. There may be other weavers who contribute along the way: whānau; other ākonga; other kaiako; and members of the community.

As the expert weaver, however, the teacher is responsible for holding the vision for what is being co-designed and co-created. The vision for the cloak is held in the mind of the weaver to guide decisions that will need to be made throughout the process. For a teacher, the **vision** provides clarity of focus for what society wants our young people to know, understand, do, and be like when they leave school. It also helps us to collectively look forward and focus all parts of our education system on doing the best possible job of preparing ākonga to reach their potential and become the people their whānau, iwi and community aspire for them to be. A clear vision supported by a progression-focused curriculum can help ensure this learning and growth ultimately happens.

Whakapapa | Defining the outcome

Like the various pathways through education, there are many types of cloak. Some are feathered (kahu huruhuru), others may be adorned with tassels (korowai), or finely woven tāniko patterned borders (kaitaka).⁴¹ All are functional, hold a unique beauty, and carry the mana of their makers and wearers. Importantly, a cloak needs to be appropriate for the purpose that it is needed. It is this purpose that determines the first step of the weaving process – the casting on (whakapapa) – which defines the shape and form for the cloak. The whakapapa is the foundation for the creation, providing for a network of connections and relationships that are woven between each of the components.

⁴¹ Hetet, V. (2018). They're not all korowai: a master weaver on how to identify Māori garments. The Spinoff, 26 April 2018. <https://thespinoff.co.nz/atea/26-04-2018/theyre-not-all-korowai-a-master-weaver-on-how-to-identify-maori-garments/>



6. Whakapapa (casting on)

In a progression-focused curriculum, purpose-for-learning statements for each phase of schooling serve the same purpose. They provide a picture of our aspirations for a learner's holistic growth over time and describe what we want learners to be like as they grow and progress through the phases of their learning. Purpose-for-learning statements focus on the whole child and they bring together big ideas from the learning areas and key competencies in ways that are clearly linked to society's overall vision. Part 6 of this paper elaborates on purpose-for-learning statements (tauākī ako) in more detail. .

Te aho tapu | Setting a clear focus

The next step in the weaving process is the weaving of the Aho Tapu – the first row of the pattern. The Aho Tapu takes considerable attention and focus by the weaver because it determines the design for the cloak. If there is an error in this first row, the whole pattern will be affected. For this reason, it demands the weaver's full attention to ensure that it is accurate and woven well.

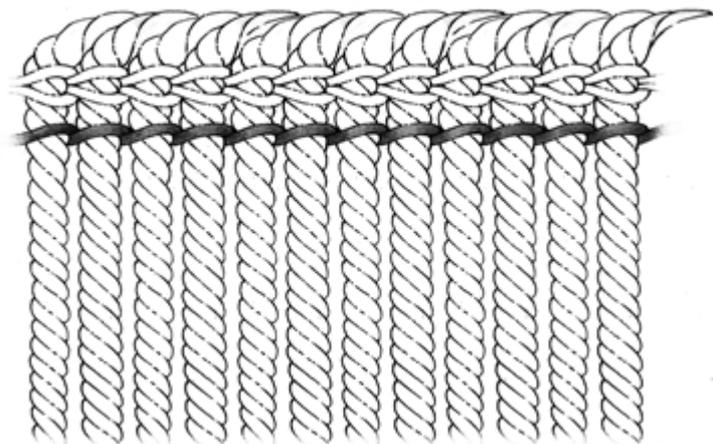


Figure 1. Aho Tapu (the first row)

In a progression framework **Learning Area Essence Statements** and **Waypoints** serve a similar function, setting the direction for learning. Learning Area Essence Statements describe how the learning area contributes to the overall vision. Waypoints describe what we

want learners to know, understand and do at each phase of their learning, in each learning area. They support the higher-level purpose-for-learning statements and determine the pattern for how each learning area will be woven. Together, the essence statements and waypoints are clear about ākonga entitlement and what's most important, and at the same time they provide appropriate flexibility for local decision-making that recognises the differing priorities, values and aspirations of different iwi and communities. Waypoints signal the importance of learners experiencing a broad and balanced curriculum over time through a curriculum that treats cognitive, physical, aesthetic, cultural, creative, and social and emotional development as equally important.

Kotahi te aho ka whati; ki te kāpuia e kore e whati | Weaving connections and durability

Each cloak is constructed using vertical (*whenu*) and horizontal (*aho*) strands. The actual quantity and length of *whenu* vary between cloaks depending on the width and length needed to fit the wearer. This is important, as a cloak that is not tailored to the wearer risks being ill-fitting. In our metaphor, the wearer is the ākonga, and *whenu* represent learning areas or domains of learning. Some of those *whenu* will represent learning areas drawn from the national curriculum, others will be learning derived from the local curriculum and determined locally. What is important here is that there is a place for both types of curricula and that they work together to create a comprehensive learning journey – just like all *whenu* are necessary for a complete and well-fitting garment.

Aho, the horizontal threads, are woven through the *whenu* using a technique known as *whatu*. The *aho* provide strength and durability to the cloak - the closer together the *aho* are, the stronger the *kākahu* will be. If *aho* are too far apart the resulting garment becomes less durable and there will be gaps between the *whenu*. Typically, the technique involves using two pairs of thread (*whatu ahorua*) that are interwoven to bind the vertical strands (*whenu*) together. It is through the weaving of these threads that the *kākahu* takes shape.

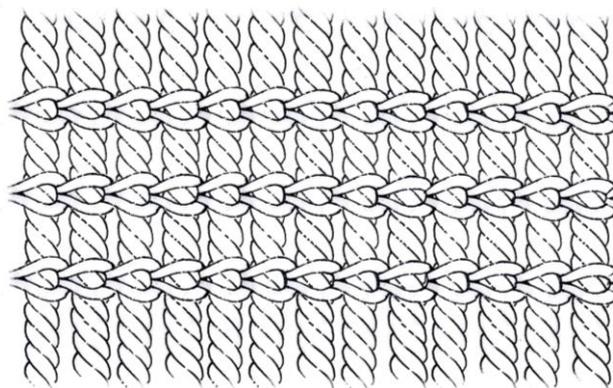


Figure 2. Ahorua (double threads)

The two sets of the *ahorua* (double threads) represent two important elements in a progression framework that must be woven together. The first pair of threads depict the important contexts that provoke increasingly sophisticated learning i.e., contexts worth

exploring. The second signifies the rich learning opportunities that support success. The two go hand-in-hand, providing strength and durability to the learning. They are determined at a local level, based on the local context, local aspirations, and ākonga preferences, forming part of the local curriculum (*marau ā-kura*).

Contexts worth exploring

Contexts worth exploring steer teachers and learners toward progressively challenging contexts that must or could be explored because they have enduring significance because they are of lasting value for ākonga beyond their schooling years and will support progress towards the bigger vision we have for them. Signalling contexts worth exploring would highlight contexts of particular cultural, historical and societal significance to Aotearoa, as well as those from beyond our shores. In a progression-focused curriculum, contexts become progressively more abstract, complex, and/or distant from learners' experience over time.

Rich opportunities to learn

The richness of opportunities for learning is key to making progress. Rich opportunities are carefully designed to increase the breadth, depth, and complexity of the learning experiences in which ākonga engage as they progress along their learning pathways. Rich opportunities to learn provide a way for ākonga to connect to the world beyond the classroom and help align our vision for ākonga with the actual learning opportunities they experience. They also require schools and teachers to engage with their iwi and their wider community to seek out authentic questions, issues and opportunities that matter to iwi and community.

Whakanikohia | Adorning the cloak

In a progression-focused curriculum, ākonga achievement can be described in terms of their talents and dispositions (their being) as well as what they understand, know, and do. Weaving contexts worth exploring and rich opportunities to learn in unison through the learning areas should enable ākonga to engage deeply with the content of the curriculum and to display their progress toward meeting the progress outcomes.

In our metaphor, these indicators of progress and achievement are depicted by the way the cloak is adorned. Each kākahu has the potential to be styled in a unique way. Adornments can be personalised to the wearer in terms of the quantity, quality, type (e.g., native or other bird feathers, tassels, or coloured thread), and the spacing of the adornments. Yet, importantly, it is the skill of the weavers, in particular the expert weaver and the quality of the weaving which enables the addition of any adornments. The *whatu* technique of weaving the *ahorua* (*contexts and learning opportunities*) together through the *whenu* (*learning areas*) provides the opportunity for adorning the cloak (*progress and achievement*).

Like the weaving of a kākahu, curriculum design and implementation takes expertise, time, careful thought, consistent effort, and tailoring to ensure that all the important elements come together in a way that is fit for purpose. Weaving the multiple strands of a progression-focused bicultural curriculum will take a clear, shared vision that prioritises the aspirations of

whānau and ākonga and engages with whānau and iwi as equal partners in the weaving process from the outset.

Part 6: A focus on curriculum elements

In Part 5 we presented the metaphor of a woven cloak (kākahu) to convey our understanding of how elements currently being explored in a range of curriculum refresh initiatives might work together to form the basis of a progression-focused, bicultural curriculum. In Part 6 we take this metaphor and translate it into an actual framework for a progression-focussed curriculum.

We propose that the refreshed NZC replaces curriculum levels with phases of learning (taumata ako) that organise the previous eight levels into the following developmental phases: years 1-3; years 4-6; years 7-8; years 9-10; years 11-13. To provide guidance about progression within and between these phases of learning, we propose the following new elements for the refreshed curriculum:

- Purpose statements (Tauākī ako) that describe the focus, strategic aims, and ‘worry points’ associated with each phase of learning,
- Learning Area Essence Statements (Iho)
- Waypoints (Tohu ako)⁴² that describe what we want ākonga to know, understand, and do at each phase of their learning, in each learning area

We see these elements as being supported by:

- Waypoint elaborations that provide important detail about how the aspirations described by purpose statements and waypoints emerge and develop
- Tools that help teachers to elicit and interpret evidence of learning and progress
- Communities of practice where members are involved in group-decision making about ākonga and their learning

The relationships between these curriculum elements are summarised in the overview diagram on the next page.

⁴² These are currently named ‘Progress Outcomes’ in the draft History Curriculum

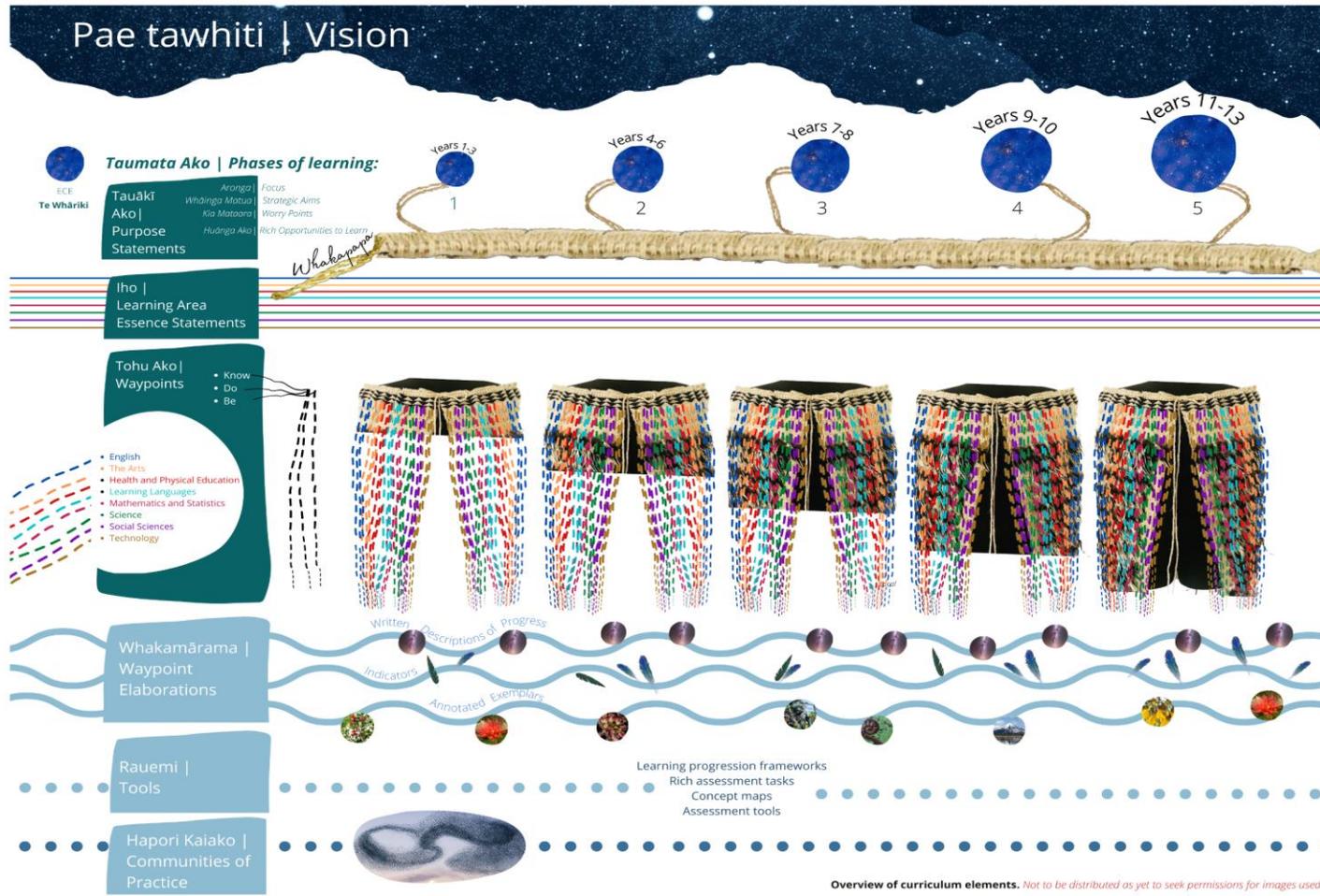


Figure 3 Overview diagram

Tauākī ako | Purpose statements

The metaphor of weaving a cloak (see Part 5) frames each young person's learning journey holistically. In this metaphor, the whakapapa shapes the overall learning journey right from the point of casting on. It does this by providing an overarching purpose statement (tauākī ako) for each phase of learning. The statements provide a rich sense of the purposes for learning within a phase of learning or taumata ako. They capture the high-level essence of developmental shifts, learning opportunities, and challenges that might be anticipated within the phase.

Purpose statements were initially developed for the *Coherent Pathways Tool* in the Ministry's Local Curriculum Toolkit.⁴³ The statements in the *Coherent Pathways Tool* drew on capabilities research,⁴⁴ OECD research,⁴⁵ and teachers' practical experience. The diverse sources of expertise were drawn together to describe ways to focus important learning in years 1-3, 4-6, 7-8, 9-10, and 11-13. These phases of learning were chosen because they provide a way of mapping growth across distinctly different developmental phases and align with key transitions in our school system.

The purpose statements in the *Coherent Pathways Tool* were designed to meet a practical need. They clarified the purpose for designing rich learning opportunities for ākonga at each phase of their learning.⁴⁶ They provided a focus that enabled teachers and leaders to work collaboratively to design 'libraries of experiences' and 'rich opportunities to learn' for phases of ākonga journeys through school.

We think this curriculum element would be well received. The purpose statements in the *Coherent Pathways Tool* resonated with the leaders and teachers who used them, helping them to see the big picture across the whole learning pathway. A related benefit was the clear focus on key features of the learning opportunities that teachers needed to design for ākonga in their year group. Given that purpose statements in these tools have been well received, it is now timely to explore potential next steps for further developing this idea as an essential element of the NZC.

Linking to society's overall vision for ākonga

Together, the Purpose Statements provide a high-level picture of what is important at each learning phase. They carry the curriculum story at a high level – the whakapapa - orienting

⁴³ See Coherent Pathways Tool Guidance

https://curriculumtool.education.govt.nz/Content/Guidance/Files/Coherent_Pathways_Tool_Guidance_MinEd.pdf

⁴⁴ For example: Hipkins, R. <https://www.nzcer.org.nz/research/publications/weaving-coherent-curriculum-how-idea-capabilities-can-help>

⁴⁵ See OECD publications including [https://www.oecd.org/education/2030-project/teaching-and-learning/](https://www.oecd.org/education/2030-project/teaching-and-learning/learning/)

⁴⁶ It is important to note that Purpose for Learning Statements are not expectation statements for the end of each phase. Expectations for the end of each phase are currently expressed in the 'know- do –understand' statements for each learning area.

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ākonga and all who support their learning towards society's overall vision for education: ākonga leaving school as bicultural, confident, connected, actively involved, lifelong learners who are well equipped with the knowledge, competencies, and values they need to realise their potential and contribute to the wellbeing of Aotearoa and the planet. They do this by:

- providing ākonga and all who support their learning — teachers, parents, whānau, iwi and the wider community — with a clear, shared view of important learning for each development phase
- informing the collaborative design and implementation of rich learning opportunities that support learning continuity for ākonga within and across settings
- helping ākonga see where they have come from, where they are going to, and some of the learning they can look forward to
- identifying 'worry points' that are important to notice, recognise and respond to at each phase.

For this to be achieved in a bicultural curriculum, purpose statements will necessarily be co-designed with Māori to ensure they capture a fuller, coherent view of important learning and development in each phase.

This approach will also promote purpose statements that help teachers and leaders to evaluate the pedagogical quality and richness of the learning opportunities they offer by asking questions, such as:

- How well do the rich learning opportunities we offer support the purpose for learning in each phase?
- To what extent are we making coherent connections between learning areas to support the purpose for learning in this phase?
- How can we work productively with others to ensure a coherent pathway for ākonga as they transition between phases?

When viewed together, purpose statements describe what we want learners to be like as they grow and progress through the phases of their learning. Progressions can be at different levels of granularity, but it is important that these high-level progression statements create a clear and holistic narrative across a student's whole learning journey.

A framework for signalling breadth, depth, and complexity of learning over time

Purpose statements signal the breadth, depth, and complexity of the learning experiences that ākonga engage with as they progress along their learning pathways. They highlight the need to support ākonga to progress. The current draft of the Aotearoa New Zealand Histories curriculum frames that progress in relation to what ākonga will **know, understand, and do**.

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Following our argument for a progression-focused bicultural curriculum we propose a revision to a framework that foregrounds what ākonga **know, do, and be**.

The rationale for proposing the addition of 'be' to the framework is to take seriously the call for our curriculum to be a bicultural one.

Bicultural aspirations require much more than knowing things. Knowledge is vital, but it is not sufficient. Similarly actions (signalled by the 'do' part of the framework) are vital but also not sufficient. Biculturalism is a way of *being*. It demands particular attitudes values and dispositions which must be signalled as important. They should not be in a separate section of the curriculum, but rather made explicit and prominent in purpose statements and learning area essence statements.

There is a clear rationale for using the 'know' part of the draft histories framework, rather than the understand element. In a progress-focused curriculum, understanding IS the way in which knowledge develops. Knowledge and understanding are not distinct categories, but rather are closely inter-related. One way of indicating this would be to use 'know' in the framework and signal that progress is demonstrated when ākonga move from knowing things, to more deeply understanding them. An alternative approach would be to signal that knowing and understanding are integrated: both are the target of curriculum aspirations. The term could be 'knowledge and understanding' or 'know and understand', to signal that they both become deeper and broader.

In the Aotearoa New Zealand Histories framework, '**know**' was associated with **contexts**, and '**understand**' was associated with **big ideas/concepts**. Our reflection suggests that there are things to 'know' and to more deeply 'understand' about **both** contexts and big ideas/concepts.

While a clear, simple and memorable framework would be useful for organising curriculum content, we suggest that 'know, do and be', is considered as a framework that is more consistent with the progression-focused bicultural approach proposed for our refreshed NZC.

Figure 5 that follows outlines the components within each of these elements (know, do, be) , the inter-relationships between them, and what progression in them might look like.

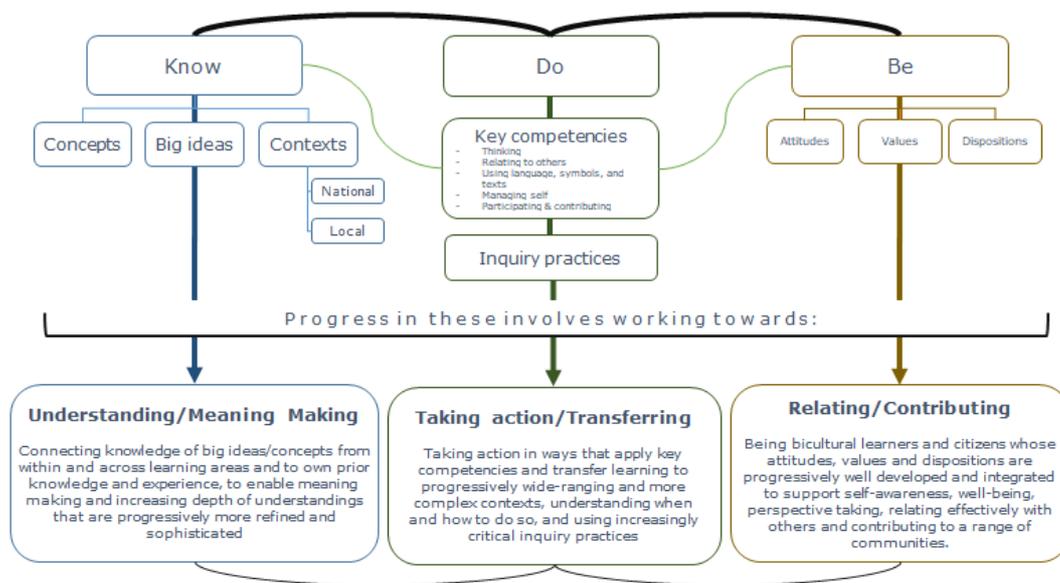


Figure 4 'Know, do, be' as a framework for curriculum progression

Signals about progression

The table that follows is our preliminary attempt to scope sets of learning descriptors that could guide the work of curriculum developers.

Ākonga learning opportunities are likely to be more coherent when schools plan strategic pathways across transitions, over the years and across settings. There are also important 'worry points' that are distinct and need to be foregrounded in each learning phase. Essence statements will also need to be revised in the refreshed NZC, to ensure that they provide clear, coherent signals about the ways in which each learning area contributes to the overarching vision and whakapapa. In a progression focused curriculum, each learning area essence statement will need to signal, at a high level, how learning might change and grow over time.

With these challenges in mind, we now draw on the *Coherent Pathways Local Curriculum Design Tool* to outline a possible approach to designing purpose statements for phases of learning in years 1-3, 4-6, 7-8, 9-10, and 11-13.

We see the Focus, Strategic Aims and Worry Points as informing the high-level purpose statements for *each* phase. We see the whole table, including inquiry experiences, learning to learn and contexts as being useful when drafting expanded 1–2-page statements for each phase and for informing learning area writers as they develop essence statements and waypoints in each learning areas.

As we populated the table that follows with draft content, we sometimes struggled to make meaningful distinctions between the year 7-8-, and 9-10-year bands. There is an argument for combining these bands into a bigger 'middle school' band but, on balance, we recommend

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that this distinction is retained because it aligns with key transitions in our school system and because there are important 'worry points' that need to be noticed and responded to in the Year 7- 8 phase.

At this point, the table that follows is intentionally patchily populated with a mix of insights from published research and the practical wisdom of teachers, as previously collected in places such as the *Coherent Pathways Local Curriculum Design Tool*.

It is important that any use of this design approach does not descend into overpopulation of the table with too much finer grain-size detail. It is also important to note that ākonga do not need to 'master' a phase before they can access the next one and that the design of contexts for learning and rich opportunities to learn need to be developmentally and emotionally appropriate for all ākonga, especially for those working long term in the years 1-3 foundation phase.

We have three purposes in mind for a table such as the one that follows:

1. Supporting writers to develop high level purpose statements and overarching descriptions that show differentiation and progress across each phase of learning.
2. Supporting the learning area writing teams as they develop their curriculum area essence statements and the supporting waypoint statements.
3. Informing any materials produced to support school leaders as they make decisions about their local curriculum.

Table 2 Possible categories and prompts to consider when developing learning area essence statements and purpose statements for phases of learning

| Taumata ako Phases of learning ⁷ | | Years 1-3 | Years 4-6 | Years 7-8 | Years 9 - 10 | Years 11 -13 |
|--|--|--|--|--|---|---|
| Tauākī ako Purpose statements | Aronga Focus | Building on learning foundations from home and ECE, and expanding ākonga experiences of the world ⁸ | Expanding ākonga knowledge and capabilities via a rich range of experiences that open up new ideas and ways of exploring the world | Exploring new ideas and expanding ākonga knowledge and capabilities to apply disciplinary thinking to real-world challenges | Building disciplinary knowledge and connections while continuing to strengthen capabilities to act on issues of concern to ākonga and others | Consolidating ākonga knowledge and capabilities within and across disciplines while building towards post-school pathways |
| | Whāinga Matua Strategic aims | Developing strong foundations in oral language, reading, writing, and mathematics, all of which are critical for learning. Encountering the richness of the full breadth of the curriculum as they build their library of experiences. Developing patterns of behaviour, thinking, and interaction that strengthen ākonga conceptions of themselves as learners and contributors to their communities. | Reading, writing, and mathematics knowledge and skills continue to grow and are increasingly used to support learning in other learning areas. Learning experiences across the curriculum continue to expand and deepen. Growing awareness of who they are supports students to build on others' ideas and change their views when appropriate. Beginning to gain a sense of ways that people can make positive differences that benefit themselves and others. | Literacy and numeracy skills and the approaches, languages, and conventions of the eight learning areas, are increasingly used with purposeful deliberation. Ākonga are increasingly aware of preferences and strengths as their library of learning experiences continues to grow. Ākonga collaboratively explore ideas and take action to solve real life problems. Gaining increasing independence in learning and in life choices | Ākonga use expanding repertoires of conceptual knowledge from different learning areas, and build connections between related concepts, within and across disciplines. They continue to engage with the full breadth of the curriculum. They also engage in critical dialogue with others to improve their learning. Ākonga are Increasingly active citizens (readers, creators, consumers, problem solvers, and thinkers). | Ākonga pursue coherent learning pathways while keeping open options for future study and work. They work hard towards personal goals, including qualifications, and are adaptable and flexible in new and changing situations. Ākonga are confident to actively participate in and contribute to diverse opportunities in the community |
| | Kia Mataara! Worry Points⁹ | By the end of year 3 ākonga need to understand and use the 'codes' for reading writing and maths | By the end of year 4 ākonga need to be able and motivated to read and write independently. | By the end of year 8 ākonga need to understand that learning requires perseverance, good communication and self-management. | By the end of year 10 ākonga need to be clear about their pathways and choices and have coherence in their subject choice mix. | By the end of their schooling, ākonga need a qualification that accurately reflects what they know and can do and is relevant to what they aspire to do beyond school. |

| Taumata ako Phases of learning ⁷ | | Years 1-3 | Years 4-6 | Years 7-8 | Years 9 - 10 | Years 11 -13 |
|--|--|--|---|--|--|--|
| Huānga Ako Rich Opportunities to Learn | Pakirehua Inquiry Experiences | <p>With support, ākonga undertake a wide range of simple inquiries.</p> <p>They are likely to think that simple one-off investigations can straightforwardly yield answers.</p> | <p>Ākonga undertake investigations that draw on relevant disciplinary practices.</p> <p>They are increasingly aware of the need to be systematic in gathering and interpreting data.</p> <p>With support, they use evidence to support their claims</p> | <p>Ākonga pose questions and design investigations appropriate to the inquiry practices of the relevant discipline.</p> <p>They can make and follow a plan.</p> <p>They justify their own position by using evidence.</p> | <p>Ākonga draw on their growing repertoire of conceptual knowledge to frame activities at all stages of an investigation (from problem posing/question asking through to interpretation of findings).</p> <p>They can give clear reasons for their choices and actions.</p> | <p>Ākonga demonstrate an increasing mature grasp of disciplinary inquiry practices – they know how knowledge is created and validated and they have strategies for determining the trustworthiness of sources.</p> <p>They recognise when outcomes are probabilistic rather than clearly determined.</p> |
| | Pūkenga Ako Learning to Learn^{47 48} | <p>Ākonga can state their own ideas and are willing to listen to those of others.</p> <p>They are beginning to recognize that what they think is different from why they think it.</p> | <p>Ākonga are beginning to talk about theoretical entities (e.g. gravity) but tend to treat these as factual.</p> <p>They adopt new ideas most easily when these align with their existing theories of cause and effect.</p> <p>Their ability to take different perspectives is growing stronger.</p> | <p>Ākonga draw on their emerging understanding of disciplinary concepts as well as their personal experiences/theories when explaining events and phenomena.</p> <p>Increasingly, they can think critically about their own ideas and explain how these have changed over time.</p> <p>They can compare and contrast their ideas with those of others.</p> | <p>Ākonga are increasingly able to identify and address inconsistencies in their own thinking and to evaluate the quality of their reasoning against specific criteria.</p> <p>They are beginning to recognise when new evidence disconfirms their personal theories.</p> <p>Ākonga perspective taking skills are stronger and they can shape basic explanations about why people might hold different views of the same</p> | <p>Ākonga show increasing coherence in the explanatory frameworks that organise their conceptual knowledge base.</p> <p>They willingly explore and challenge their own and other's thinking.</p> <p>They are increasingly willing and able to look beyond linear models and cause and effect to recognise complexity at work in the world.</p> |

⁴⁷ The nature and importance of “unthinkable” knowledge in the disciplines risks being side-lined if the focus of learning focuses only on more prosaic employment considerations. Hughson, T. & Wood, B. (2020). The OECD Learning Compass 2030 and the future of disciplinary learning: a Bernsteinian critique. *Journal of Education Policy*, DOI: 10.1080/02680939.2020.1865573

⁴⁸ Based on a literature review in the context of science education (Hipkins, R. & Kenneally, N. (2003). Using NEMP to inform the teaching of science skills. New Zealand Council for Educational Research.)This line has been added in recognition of the need for a more explicit focus on epistemic thinking (as in the OECD 2030 learner compass, for example).

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| | | | | | events/experiences | |
|--|--|--|---|--|---|--|
| Taumata ako Phases of learning ⁷ | Years 1-3 | Years 4-6 | Years 7-8 | Years 9 - 10 | Years 11 -13 | |
| Horopaki ako Contexts | Contexts can be both familiar and surprising. They nurture curiosity and questioning and introduce ākonga to a rich range of experiences | Contexts increasingly take students beyond the familiarity of everyday experiences. They enjoy exploring “extremes” of reality (e.g. heroes; oddities; extraordinary endeavours etc.) ⁴⁹ [13] | Ākonga expand their foundational conceptual learning of big ideas in an increasingly diverse range of contexts. | Local contexts help ākonga deepen their understanding of ‘place’ ⁵⁰ but they also increasingly look beyond the local to global contexts, increasing their awareness of the interconnectedness of people, places, and things | Increasingly challenging contexts provide opportunities for students to draw on and connect knowledge from different disciplines to address complex challenges of concern to them and other young people. ⁵¹ [52] Some contexts offer opportunities for abstract thinking that transcends everyday experiences. ^[16] | |

⁴⁹ Kieran Egan calls this the “romantic” stage of expanding imagination and learning: <https://ierg.ca/about-us/a-brief-guide-to-imaginative-education/>

⁵⁰ This is seen as particularly important in a bicultural curriculum with a specific focus on aspects of mātauranga Māori. See for example: Penetito, W. (2009). Placed-based education: Catering for curriculum, culture and community. *New Zealand Annual Review of Education*, 18, 5–29.

⁵¹ See Wood and Sheehan (2020) for a commentary on the importance of choosing contexts that provide sufficiently challenging opportunities for students to strengthen the capabilities needed for citizenship in the years beyond school, and for success in NCEA assessments. Wood, B. E., & Sheehan, M. (2020). Transformative disciplinary learning in history and social studies: Lessons from a high-autonomy curriculum in New Zealand. *The Curriculum Journal*, curj.87. <https://doi.org/10.1002/curj.87>

⁵² The nature and importance of “unthinkable” knowledge in the disciplines risks being side-lined if the focus of learning focuses only on more prosaic employment considerations. Hughson, T. & Wood, B. (2020). The OECD Learning Compass 2030 and the future of disciplinary learning: a Bernsteinian critique. *Journal of Education Policy*, DOI: 10.1080/02680939.2020.1865573

We regard this as a work in progress and expect that these descriptors will be modified and updated as different interest groups work with them. It could also be appropriate to commission new research that tests out the ideas in each row of the table to ensure nothing important has been overlooked. We debated whether there should be a row that highlights the importance of Social and Emotional Learning (SEL) for example. We are aware that there are several current Ministry of Education initiatives with this focus and this could be an opportunity to align them within the overall curriculum development programme. We also think it will be important to double check any purpose statements to ensure that NZC values are clearly and adequately reflected in the content, and made visible in any accompanying commentary.

Final thoughts

Nāu te rourou, nāku te rourou, ka ora ai te iwi.

With your food basket and my food basket, the people will thrive

The brief given to us was to outline a progression approach to curriculum design, within a bicultural curriculum. We have approached this task by developing the metaphor of weaving a kākahu. We believe that the metaphor can carry a deeper sense of the commitment and spirit involved in the approach we have proposed than words alone. It is our hope that the ideas we have described will nurture and feed into design thinking for a refreshed New Zealand Curriculum that:

- captures what our society believes really matters for life in, and beyond bicultural Aotearoa, so providing clarity about the learning our ākonga are entitled to
- inspires and guides learning that supports our young people and their communities to thrive in our bi-cultural society
- helps teachers to recognise and respond to the progress their ākonga are making
- enables ākonga Māori to achieve and succeed as Māori in English-medium settings
- provides enough flexibility to enable leaders and teachers to be responsive to what their ākonga, whānau, iwi and community see as important.