

MINISTRY OF EDUCATION
Te Tāhuhu o te Mātauranga

An Introduction to Books 11–15

He Whakamōhiotanga ki ngā
Pukapuka 11–15

10

Kei Tua o te Pae
Assessment for Learning:
Early Childhood Exemplars



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Kei Tua o te Pae
Assessment for Learning:
Early Childhood Exemplars

An Introduction to Books 11–15

He Whakamōhiotanga ki ngā Pukapuka
11–15

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Introduction

He kupu whakataki

The strands of *Te Whāriki*

This curriculum is founded on the following aspirations for children: to grow up as competent and confident learners and communicators, healthy in mind, body, and spirit, secure in their sense of belonging and in the knowledge that they make a valued contribution to society.¹

This book introduces the section of *Kei Tua o te Pae/Assessment for Learning: Early Childhood Exemplars* that focuses on the five strands of *Te Whāriki*. This section is made up of five books that explore and discuss assessment for learning, taking the lens of each strand as the front frame for analysis while at the same time recognising the integrated nature of the strands. Each strand describes an area of learning and development that is “woven into the daily programme of the early childhood setting” (*Te Whāriki*, page 44).

The five strands of *Te Whāriki* and their associated exemplar books are:

- **Belonging** **Mana Whenua (Book 11)**
- **Well-being** **Mana Atua (Book 12)**
- **Exploration** **Mana Aotūroa (Book 13)**
- **Communication** **Mana Reo (Book 14)**
- **Contribution** **Mana Tangata (Book 15)**

The strands in te reo Māori represent five realms of mana. Referring to the strands as “achievement aims”, Tilly Reedy commented that these realms of mana ensured:

that the learner is empowered in every possible way. The main achievement occurs in the development of the child’s mana. The child is nurtured in the knowledge that they are loved and respected; that their physical, mental, spiritual, and emotional strength will build mana, influence, and control; that having mana is the enabling and empowering tool to controlling their own destiny.²

The five strand books focus on assessment for learning with these five enabling and empowering realms of mana in mind. There is a connection here to the curriculum principle of Whakamana or Empowerment in *Te Whāriki* (page 14). The curriculum emphasises the role of socially and culturally mediated learning and of reciprocal and responsive relationships between people, places, and things (*Te Whāriki*, page 9). Children are learning to recognise, respect, relate to, orchestrate, and reshape these mediating and enabling resources.

The parallel enabling resources in the English version can be explained further as:

- **Belonging:** ways of being that enable a learner to make connections with contexts and communities beyond the early childhood setting and that enable the learner to find the early childhood setting an interesting place to be;



- **Well-being:** experiences that provide the foundations of well-being and trust so that a learner is enabled to “read” a learning environment and to be emotionally engaged and intellectually involved;



- **Exploration:** ways of actively exploring and responding to challenges and conceptual frames from a range of world views that help a learner make sense of the world;



- **Communication:** modes of expression for confidently communicating understandings, feelings, and ideas;



- **Contribution:** relationships with people who help a learner negotiate meaning, providing alternative perspectives and ways to collaborate.



Learning outcomes in *Te Whāriki*

Learning dispositions and working theories

In *Te Whāriki*, learning outcomes are combinations of knowledge, skills, and attitudes. *Te Whāriki* summarises them on pages 44–45, describing them as “more elaborate and useful working theories about themselves [the children] and about the people, places, and things in their [the children’s] lives” and as learning dispositions. These are holistic outcomes that integrate knowledge, skills, and attitudes and also thinking and feeling.

The Hirini Melbourne oriori (lullaby) in Book 1 includes the lines:

Whāia te māramatanga	Seek out the secrets of the
O te hinengaro	hidden well-spring of your mind
O te wairua	and know the sounds and
	dreams of your spirit.

page 2

In *Te Wheke*, Rangimarie (Rose) Pere says that “Hinengaro refers to the mental, intuitive and ‘feeling’ seat of the emotions. Thinking, knowing, perceiving, remembering, recognizing, feeling, abstracting, generalizing, sensing, responding and reacting are all processes of the Hinengaro – the mind.”³

Learning dispositions and working theories are closely connected to ideas about identity. Etienne Wenger comments that “Education, in its deepest sense and at whatever age it takes place, concerns the opening of identities – exploring new ways of being that lie beyond our current state.”⁴ *Te Whāriki* describes learning dispositions as “habits of mind” or “patterns of learning” (page 44). Ron Ritchhart,⁵ writing about research in schools, also describes dispositions as “patterns” – patterns of behaviour, thinking, and interaction. Ritchhart links these patterns to a learner identity, explaining that the patterns reveal us “as thinkers and learners”. He argues for dispositions as outcomes for education because they turn abilities into action:

What kind of learning lasts beyond a given year that we can grab hold of to guide our vision [of education]? I contend that what stays with us from our education are patterns: patterns of behavior, patterns of thinking, patterns of interaction ... Through our patterns of behavior, thinking, and interaction, we show what we are made of as thinkers and learners ... [I]ntelligent performance is not just an exercise of ability. It is more dispositional in nature in that we must activate our abilities and set them into motion.⁶

Learning dispositions contribute to working theories about the self as a learner. *Te Whāriki* upholds the image of children as confident and competent learners by quoting on page 3 (opposite the imprint page) Margaret Donaldson and her colleagues reminding us of the critical role early childhood plays in helping young children shape an identity of themselves as confident and competent:

By the time this [early childhood] period is over, children will have formed conceptions of themselves as social beings, as thinkers, and as language learners, and they will have reached certain important decisions about their own abilities and their own worth.⁷

Assessment also contributes to working theories about the “self” as a learner. (See the research findings on pages 13–14 in this book). In Book 2, *Sociocultural Assessment/He Aromatawai Ahurea Pāpori*, Caroline Gipps comments on the role that assessment plays in identity formation. Writing about learners revisiting and commenting on the work in their portfolios, Ritchhart comments that “Visitors listen as the students explain their work and then ask questions about the meaning of the work for the students. Through the process, students develop an increasing sense of themselves as learners based on the review of their work.”⁸

Learning dispositions are more complex than abilities.⁹ Inclination and sensitivity to occasion are added to skills and knowledge to become learning dispositions with three aspects: inclination, sensitivity to occasion, and ability. We can think about these three aspects of a disposition as being ready, being willing, and being able. Being ready (*kia tatanga*) is where a child demonstrates the general inclination, being willing (*kia kaikaha*) is demonstrated by the sensitivity to the occasion, and being able (*kia mātau*) includes skills (*ōna pukenga*) and knowledge (*mātauranga*).¹⁰ All three aspects are necessary for turning ability into action.

Learning outcomes in the school curriculum: key competencies

There is an alignment between the curriculum strands and learning outcomes in *Te Whāriki* and the key competencies in the New Zealand Curriculum for schools. Key competencies in the school curriculum are similarly dispositional and complex. They too focus on skill or ability, together with inclination/motivation and sensitivity to occasion or context, and they too are about action.

The term “key competency” was developed within an OECD project, *Definition and Selection of Competencies: Theoretical and Conceptual Foundations (DeSeCo)*.¹¹ Helen Haste, in an early collection of papers on key competency for the OECD, comments that, in her view, competency “implies effectiveness not only in performance, but in the interpretation of context and meaning”.¹² Franz Weinert¹³ says that a key competency is an action competence and adds:

Unlike conceptualizations of competence that accentuate either cognitive or motivational aspects, action competence includes all those cognitive, motivational, and social prerequisites necessary and/or available for successful learning and action.¹⁴

Writing about key competencies, Dominique Rychen and Laura Salganik say:

In line with DeSeCo’s objective to focus on competencies that are of particular importance, the notion of key competencies is used – to start with – as a synonym for critical or important competencies ... DeSeCo conceives of key competencies as individually based competencies that contribute to a successful life and a well-functioning society, are relevant across different spheres of life, and are important for all individuals. Consistent with the broad concept of competence, each key competence is a combination of interrelated cognitive skills, attitudes, motivation and emotion, and other social components.¹⁵

Key competencies, learning dispositions, and working theories provide the foundations for lifelong learning in any domain. If the educational environments and assessment practices are in place to support them, such competencies, learning dispositions, and working theories will be enriched and will develop in strength.

Assessment principles in *Te Whāriki*

Guidelines and principles for assessing learning have been set out in the first nine books of *Kei Tua o te Pae*. Each of books 2–9 asks evaluative questions about assessment practice. The four overarching evaluative criteria, based on the four curriculum principles in *Te Whāriki*, are set out as questions on page 19 of Book 1:

- Is the identity of the child as a competent and confident learner protected and enhanced by the assessments? (Empowerment/Whakamana)
- Do the assessment practices take account of the whole child? (Holistic Development/Kotahitanga)
- Do the assessment practices invite the involvement of family and whānau? (Family and Community/Whānau Tangata)
- Are the assessments embedded in reciprocal and responsive relationships? (Relationships/Ngā Hononga)

These criteria for assessment are described in detail on page 30 of *Te Whāriki*.

Book 1, pages 9–19, sets out additional criteria for assessment for learning with *Te Whāriki* in mind. These criteria are: having clear goals, balancing the documented and the undocumented, siting assessment in everyday contexts, protecting and enhancing the motivation to learn, acknowledging uncertainty, listening to children, including collective assessments, and keeping a view of learning as complex – all features that are demonstrated in the exemplars in books 11–15.

Narrative methods of assessment and portfolios can document the complex weaving together of knowledge, skills, and attitudes into learning dispositions and working theories. Narrative methods of assessment can also note the role of enabling resources in everyday contexts and raise questions about whether they are working well:

The New Zealand model of learning and assessment, and the narrative method at its core, have, I believe, enormous potential for educators in other places. In adopting the dominant metaphor of story, in place of the tape measure (or long jump), educators are committing themselves to taking each child's learning seriously as a process, with its own life and living landmarks.¹⁶

At the same time, documented stories about learning dispositions can themselves contribute to children becoming lifelong learners. Narratives are embedded in the relationships and connections of the storyteller's community.

Bicultural assessment

In its introduction on page 2, Book 3 states:

Te Whāriki is a bicultural curriculum that incorporates Māori concepts. The principles of whakamana (empowerment), kotahitanga (holistic development), whānau tangata (family and community), ngā hononga (relationships), and the different areas of mana that shape the five strands provide a bicultural framework to underpin bicultural assessment.

That book sets out a number of principles for authentic bicultural assessment, and books 11–15 provide some examples of these principles in action. For example:

Some assessments are in te reo Māori. The exemplar “Tapahia me ngā kutikuti – Cutting with scissors” (Book 13) is an example from a centre where documented achievements are frequently written in three “languages” – Māori, English, and the visual language of digital photography. They are accessible to a range of audiences.

Some assessments are represented in ways that are consistent with tikanga Māori. The holistic nature of the context may be reflected via narrative. Some of the documentation in the exemplar “Te Tuhi a Manawatere” (Book 11) might be described as of this kind. The documentation forms a learning narrative that begins with a story: “On today’s beach trip to Cockle Bay, I told the children the story of Te Tuhi a Manawatere, underneath the actual pōhutukawa tree.”

Māori whānau and community participate in the assessment process. In Book 15, the exemplar “A grandfather’s letter” begins with the grandfather making an introduction in Māori: “Tēnā koutou e ngā kai-whakaako ki te kura. Kei konei waku whakaaro e pā ana ki te ripoata mō Taylor. He mokopuna nōku.” The grandfather then continues with his interpretation of the learning, in English.

Contributions from the home and the community are in the children’s and the centre’s assessment documentation. A contribution about “Tāwhirimatea” (in Book 11) was sent to Tia’s early childhood centre by her grandmother. The What next? section included the grandmother’s comment, “I would like the centre to be aware of this so staff can reinforce her knowledge base of Tāwhirimatea, the wind.” An early childhood centre community’s distress at, and response to, a fire at the local marae is described in “Fire at the marae” (in Book 13), together with a parent’s voice, comments from Whaea Taini at the marae, and reflections from one of the teachers.

Assessments include the collaborative and the collective. The exemplar “Drawing and chanting together” (Book 14) describes Mūmū Te Āwha and Mira drawing at the whiteboard and chanting together in tune with their drawing.

Assessments show respect in seeking advice and interpretation from whānau. The story of one early childhood centre’s preparation for a marae visit, “Te marae” (in Book 14), outlines the role of Whaea Pip, their “pouaka mātauranga”. In a multicultural context, the exemplar “Rahmat and the snakes”, also in Book 14, is eloquent about the value of interpretation from speakers of the home language.

Children’s voices are heard in the assessments. In “Whakapai kai” (Book 15), Anthony and Remy recite the whakapai kai karakia that Anthony had been taught at home; his father had written the words out for the teachers, and Anthony had taught it to Remy. Sometime earlier, the teacher had consulted the family about the tikanga of their iwi.

Book 3 sets out a continuum towards bicultural practice that is dynamic (in that it is about moving forward) and allows for multiple points of entry as centres build bicultural understandings and practices. Book 3 provides a reference for all assessment practices that support *Te Whāriki*.

Learning dispositions, dispositions-in-action, and learning stories

Many of the assessments in *Kei Tua o te Pae* (books 11–15) are learning stories. Learning stories integrate learning dispositions into a story framework and include an analysis of the learning. They frequently include Possible pathways or What next? suggestions. In the original research with teachers,¹⁷ five dispositions-in-action followed a story sequence: taking an interest; being involved; persisting with difficulty, challenge, and uncertainty; expressing a point of view or feeling; and taking responsibility.

Each of these dispositions-in-action can be seen to represent some aspects of more abstract learning dispositions. Over time, teachers have also begun to consider these dispositions on their own merits, not as part of a story sequence. For example, *taking an interest* has been useful in noticing and recognising aspects of courage and connectedness inside the Belonging/Mana Whenua strand; *being involved* has represented aspects of trust and playfulness inside the Well-being/Mana Atua strand; *persevering with difficulty, challenge, and uncertainty* has given voice to aspects of resilience and curiosity inside the Exploration/Mana Aotūroa strand; *expressing a point of view or feeling* has

relevance to aspects of communication and resourcefulness inside the Communication/Mana Reo strand; and *taking responsibility* has enabled many aspects of responsibility and collaboration to be documented in the Contribution/Mana Tangata strand. These learning dispositions have been defined in each learning community.

Possible pathways for learning

Teachers' reflections on how learning dispositions and working theories can be strengthened are exemplified in the What next? sections of the learning stories and narratives described throughout books 11–15. Teachers are developing local examples of dimensions of strength, and these provide opportunities for discussion and debate. On page 6 of Book 7, *Assessment and Learning: Continuity/Te Aromatawai me te Ako: Motukore*, competence that progresses over time is described as becoming “more *secure*, more widely *applicable*, and more *complex*”.

In a 2004 article, Guy Claxton and Margaret Carr described these same features of strengthening learning dispositions as: “robustness, breadth and richness”.¹⁸ The principles of *Te Whāriki* could also provide a guide for identifying dimensions of strength. Learning dispositions become more frequent (secure, integrated into the everyday life of the centre); frequency can be aligned with Holistic Development. They can become more *distributed* (complex, related to, and stretched across a widening range of reciprocal relationships with people, things, and other enabling resources); distributed learning can be aligned with reciprocal Relationships. They can become more *connected* (appearing in other places and social communities); connectedness can be aligned with Family and Community as an integral part of the curriculum. They can become more *mindful* as children begin to take responsibility and make up their own minds.¹⁹ Urie Bronfenbrenner has described this as allowing the child “sufficient balance of power to introduce innovations of her own”.²⁰ Mindfulness can be aligned with the principle of Empowerment.

Sociocultural links are more likely to be maintained when teachers notice and recognise features in the educational setting that enable or disable the development of learning dispositions and the narratives around them.

Dispositions to learn develop when children are immersed in an environment that is characterised by well-being and trust, belonging and purposeful activity, contributing and collaborating, communicating and representing, and exploring and guided participation.

Te Whāriki, page 45

There is a dynamic two-way link: the learning dispositions and narratives will also influence the features of the educational setting. The four dimensions of strength (outlined above) are mirrored in the enabling or disabling features of the educational setting. The cultural norms and regular events in the setting make it easier or more difficult for dispositions to become more *frequent*, robust, and practised. The accessibility of people, materials, and diverse ways to represent meaning make it easier or more difficult for dispositions to become more richly *distributed*. The connections developed with families and a diversity of social communities make it easier or more difficult for dispositions to achieve more breadth and become more widely *connected*, and the flexibility of the power balance between adults and children makes it easier or more difficult to reshape and consider new possibilities – to become more *mindful*.

Assessment plays a key role in this two-way process as teachers notice, recognise, respond to, record, and revisit learning stories and learning dispositions.

Possible pathways with learning dispositions in mind: an analysis of an exemplar

“The three friends” exemplar in Book 15 provides excerpts from the portfolios of three children, Tane, Sarah, and Leon, over a period of time when they collaboratively developed their interest in sewing.

August

Sewing project



Working together on cutting out their patterns and fabric.



Leon and Tane drawing their designs on their jackets.
Leon made maps on his police jacket and Tane drew an ambulance.

Frequency and regular events

The children’s learning repeated the learning story framework several times as they adapted their original *interest* in a number of ways, sustained their *involvement* over time, *persisted with difficulties* (with the adults often providing more assistance), negotiated with each other, and took *responsibility* in order to make the project their own.

The children’s individual portfolios include many stories about their deep involvement in projects that either they or others initiated and in which they became enthusiastic and interested participants. Sarah, for instance, was part of “The mosaic project” described in Book 2. These enterprises have become routine and regular events at this early childhood centre – it is what they do there, and spaces (in terms of place and time) are provided for such projects to develop. Children often observe events for some time before they become involved. The teachers have developed a “culture of success” in the way that they notice, recognise, respond to, record, and revisit learning.

Sarah sewing



Tane and Sarah discussing their ideas about the type of fabric they could use for sewing.



Distribution across helpful people and enabling resources

Tane, Sarah, and Leon were learning about the distributed nature of pursuing an interest over time, becoming increasingly sensitive to which fabrics might be best for the task and which adults have particular expertise. They became particularly skilful at marshalling and adapting the support they needed in order to persevere with difficult enterprises and to achieve complex aims. They discussed their plans with each other, and the teachers made suggestions as well. The teachers provided a range of interesting materials and brought in a sewing machine when the project seemed to need it. They found that patterns were useful, and they combined drawings with sewing. Photographs reminded them of their learning journey. The teachers stepped up their direct assistance when a sewing machine was needed.

Connection to a diversity of social communities

These particular stories may have begun with the story from home about Tane sewing with his grandmother (it included a photograph). That story emphasised Tane coping with difficulty. Ideas and intentions came from the children's knowledge about the work (and uniforms) of ambulance drivers and police officers. The social communities inside the early childhood centre became more diverse – extending from one child to include this group of three and then expanding to include other children (some of whom were initially visible on the periphery of the photographs). Connections continued to be made with home. The teacher commented to the children that Sarah's mother sewed (and therefore might have a pattern for trousers). The children were reminded that sewing stories happen elsewhere.

Mindfulness and flexible power balances

The children frequently took the initiative and became more capable at negotiating ideas with others (for instance, discussing how different fabrics might be used). Sarah resisted Tane's suggestion that she make an apron as he did and followed up on an imaginative idea of her own (creating a noticeboard for her bedroom at home). Tane has an imaginative idea of his own – to create a bicycle helmet from black lace (not included in the exemplar).

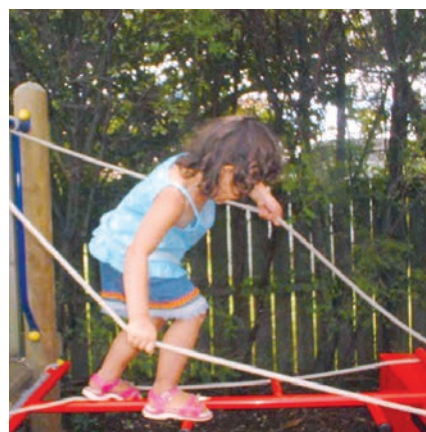


The three friends (Book 15)

How can assessments contribute to an understanding of continuity and to the growing strength of learning?

Many of the exemplars in books 11–15 directly document the continuity of learning in some way. A key strategy for mutual understandings about continuity and increasing strength is revisiting the documentation with children and families. Not all revisiting conversations with children and families are documented, but these conversations are also important pedagogical opportunities. Assessment for learning becomes assessment as learning. A teacher comment in the exemplar “O le matamatagā tusi” (Book 13) points to the value of portfolios being accessible for revisiting and reflecting on the learning. Fergus and William revisiting their folders is documented in the exemplar “Fergus and William take their folders outside” (Book 11).

Revisiting invites children to identify their own progress and to develop their own goals. (See Book 4 for a discussion about children contributing to their own assessment.) In Book 13, Amy states that she is “getting better and better ... It used to be hard”, and in the same book, children contribute their prior knowledge about camping before going on a camping trip, and a parent documents the value of the camping experience for one of the children. The What next? sections in learning stories provide cues for discussion when a portfolio is revisited as well as being guides for planning.



“I'm getting better and better” (Book 13)



Jedd's increasing participation (Book 11)

A common way to represent continuity is to document progress through a series of notes, photographs, and/or learning stories. The sewing project of “The three friends” exemplar was documented in this way. In the exemplar “Jedd’s increasing participation” (Book 11), Jedd’s participation is described as it increases from July through to March of the next year. Layne’s developing curiosity is documented in “The acrobat” (Book 13).

The exemplar “Suelisa’s sense of belonging” (Book 11) is set out in a series of learning stories, and the inclusion of photographs of her family from earlier documentation (two years previously) allowed the assessment folder to become a powerful resource for strengthening Suelisa’s sense of belonging.



Suelisa's sense of belonging (Book 11)



A business venture (Book 15)

The progress of “A business venture” (Book 15) was documented clearly over time.

The continuity of children’s developing curiosity and working theories in a lengthy project has been documented in the exemplar “What’s over the fence?” (Book 13).

In Book 14, there are three connected series of learning stories in the exemplar “Fuka, Colette and Fea”. The continuity for each child in terms of communication and participation is clearly set out in the stories. In this exemplar, a learning story was turned into a book, which became a mediating resource for social interaction since English was an additional language for this child.



Fuka, Colette and Fea (Book 14)

Continuity of a different kind is illustrated in “A budding archaeologist” (Book 13), when a teacher responds to a child’s interest and sets up an exploration of archaeology and history by contributing her photos from China. Similarly, in the exemplar “Te Tuhi a Manawatare” (Book 11), Helen reads the story of Te Tuhi a Manawatare to the children under the pōhutukawa tree where, according to historical records, the event occurred.

Families frequently provide continuity across time and place. The exemplars “Zachary dancing” (Book 15), “Osmana’s view” (Book 15), and “Making a card for Great-grandad” (Book 12) are examples of this. Teachers sometimes invite these connecting comments in the documentation (in “The acrobat” in Book 13, for instance). The families’ responses are, of course, not always recorded; nevertheless, they are of great importance for developing mutual understandings about continuity pathways. The exemplar “Caroline spreads her wings” (Book 12) begins with Caroline’s mother’s comment that she would like Caroline to “have a sense of independence”. The teachers document Caroline’s learning from March to December (interspersed with information from home, for example, when Caroline crawled for the first time), and the parent comments on the difference at the end. (“She is happy, independent, fun, and knows her mind.”) Likewise, a parent adds some detail to the continuity of children coping with a difficult situation in “Fire at the marae” (Book 13), and a teacher adds reflection, too.



Caroline spreads her wings (Book 12)



Finn’s dragonfly (Book 12)

Teachers comment on continuity in learning stories or narratives. A good example of this is in “Finn’s dragonfly” (Book 12), where the teacher comments to Finn on the continuity of his capacity to persevere: “This learning story reminds me of two that I have written for you previously ... I noticed then your technique ... This is exactly what you were doing today when you were drawing your dragonfly.” A home-based carer comments in “Hannah goes without a nappy” (Book 12) that “Today was the second day [without a nappy]” and tells a story about how well the day went.

In “Phoebe’s puzzling morning” (Book 14), a teacher introduces a story about Phoebe by commenting that she “often enjoys setting herself the task of solving puzzles” and then documents observations and discussions with Phoebe that support this statement. In “Alexander and the trees” (Book 12), the teacher records, through comments, photographs, and conversations, how Alexander’s paintings of trees, and his commentaries on them, have become more complex over time.

In “Becoming part of the group” (Book 15), the teacher refers back to the events of the previous two days to highlight the new learning; and in the same book, the teacher documenting the exemplar “Teaching others” comments that “Today, however, was different from the last time.”

Perhaps the last word should go to “Issy’s new role” (Book 15), where continuity is recognised between Eden (a toddler) caring for baby Issy, and then (over a year later), Issy caring in the same way for five-month-old Jimmy. The earlier photographs are added to the later learning story for Issy. This exemplar also illustrates some important continuities of practice at the early childhood centre.



Issy’s new role (Book 15)

Kei Tua o te Pae demonstrates that learning will be strengthened only if the environment can afford its strengthening and if teachers notice, recognise, respond to, record, revisit, and reflect on multiple learning pathways.

Research findings

Ngā kitenga rangahau

The most comprehensive review of research on formative assessment in recent years was carried out by Paul Black and Dylan Wiliam at King's College, London.²¹

Black and Wiliam define formative assessment as follows:

In this paper, the term “assessment” refers to all those activities undertaken by teachers, and by their students in assessing themselves, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged. Such assessment becomes “formative assessment” when the evidence is actually used to adapt the teaching work to meet the needs. [Emphasis is included in the original.]²²

They conducted a detailed analysis of 250 sources of robust research or reviews of research on formative assessment.

All of these [most careful] studies show that innovations which include strengthening the practice of formative assessment produce significant, and often substantial, learning gains ... Many of them show that improved formative assessment helps the (so-called) low attainers more than the rest, and so reduces the spread of attainment whilst also raising it overall. [Emphasis is included in the original.]²³

Although these findings refer originally to the primary, secondary, and tertiary education sectors, they are relevant to the early childhood setting as well. The findings highlight the role of empowering processes and of reciprocal and responsive relationships in formative assessment. The review concludes that the following practices are important for effective formative assessment: meaningful and interesting tasks, the active involvement of learners, a culture of success, the opportunity for all learners to express their ideas, and self-assessment.

Meaningful and interesting tasks

Black and Wiliam,²⁴ writing about strategies and tactics for teachers' formative assessment work, include a discussion of the nature of educational tasks that form the basis for assessments. They cite research that concludes that tasks should: be interesting; offer reasonable challenge; help learners to develop short-term, self-referenced goals; focus on meaningful aspects of learning; and support the development and use of effective learning strategies. In early childhood settings where children have a sense of belonging, tasks/activities/projects will encourage learning goals through which children understand and “own” the questions and problems.

The active involvement of learners

Black and Wiliam emphasise the need in effective formative assessment to secure the responsible and thoughtful involvement of all learners. They highlight the importance of the nature of each teacher's beliefs about learning. If the teacher assumes that knowledge is to be transmitted and understanding will develop later, “formative assessment is hardly necessary”:

If, however, teachers accept the wealth of evidence that this transmission model does not work, even by its own criteria, then the commitment must be to teaching through interaction to develop each pupil's power to incorporate new facts and ideas into his or her understanding.²⁵

Early childhood teachers characteristically teach through interaction and develop a number of strategies to encourage the involvement of every child (including knowing the children well, which is an outcome of listening as well as noticing, recognising, responding to, and revisiting documentation about the child).

A culture of success

Black and Wiliam comment that:

What is needed is a culture of success, backed by a belief that all can achieve.²⁶

A culture of success should be promoted where every student can make achievements by building on their previous performance, rather than by being compared with others. Such a culture is promoted by informing students about the strengths and weaknesses demonstrated in their work and by giving feedback about what their next steps should be.²⁷

Such a culture avoids the idea that the capacity to learn is a fixed inner quality that cannot be changed by effort. In classrooms where the culture focuses on feedback in the form of rewards – “gold stars”, grades, or class ranking – then “where they have any choice, pupils avoid difficult tasks ... Many are reluctant to ask questions out of fear of failure.”²⁸ A key issue here is the beliefs that teachers hold about the learning potential of all their students.²⁹ Also, Black and Wiliam state, “There is evidence from many studies that learners’ beliefs about their own capacity as learners can affect their achievement.”³⁰ The narrative formats for assessment being developed in New Zealand early childhood contexts, learning stories for instance, are designed to contribute to a culture of success. They need to be accompanied by the teacher’s belief in the potential of all children.

The opportunity for all learners to express their ideas

Black and Wiliam also conclude that all learners should have an opportunity to express their ideas:

The dialogue between pupils and a teacher should be thoughtful, reflective, focused to evoke and explore understanding, and conducted so that all pupils have an opportunity to think and to express their ideas.³¹

In early childhood, assessments frequently include, or follow on from, children expressing their ideas. Teachers ensure that all children have this opportunity to express themselves and that discussions are genuinely reciprocal.

Self-assessment where learners take responsibility for their own learning

What this [research] amounts to is that self-assessment by pupils, far from being a luxury, is in fact an essential component of formative assessment.³²

An essential element is for teachers to provide “the stimulus and help for pupils to take active responsibility for their own learning”.³³ A number of exemplars provided in the *Kei Tua o te Pae* series include children commenting on and evaluating their own learning. Revisiting documented assessments with peers, teachers, family, and whānau provides further opportunities for the children to do this.

These research findings on effective formative assessment can be seen to parallel the five strands of *Te Whāriki*:

- Belonging – meaningful tasks
- Well-being – active involvement by learners
- Exploration – a culture of success
- Communication – the opportunity for all learners to express their ideas
- Contribution – self-assessment.

Endnotes

Kōrero tāpiri

- 1 Ministry of Education (1996). *Te Whāriki: He Whāriki Mātauranga mō ngā Mokopuna o Aotearoa/ Early Childhood Curriculum*. Wellington: Learning Media.
- 2 Tilly Reedy (1995/2003). “Toku Rangatiratanga na te Mana-matauranga: Knowledge and Power Set Me Free ...”. In *Weaving Te Whāriki: Aotearoa New Zealand’s Early Childhood Curriculum Document in Theory and Practice*, ed. J. Nuttall. Wellington: NZCER, p. 68.
- 3 Rangimarie Turuki Pere (1997). *Te Wheke: A Celebration of Infinite Wisdom*. Gisborne: Ao Ako Global Learning New Zealand, p. 32.
- 4 Etienne Wenger (1998). *Communities of Practice: Learning, Meaning and Identity*. Cambridge: Cambridge University Press, p. 263.
- 5 Ron Ritchhart (2002). *Intellectual Character: What It Is, Why It Matters, and How to Get It*. San Francisco: Jossey-Bass, p. 7.
- 6 *ibid.*, pp. 9–18.
- 7 Margaret Donaldson, R. Grieve, and C. Pratt (1983). *Early Childhood Development and Education: Readings in Psychology*. Oxford: Basil Blackwell, p. 1.
- 8 Ritchhart (2002), p. 171.
- 9 In a 1999 paper entitled “Rethinking Transfer: A Simple Proposal with Multiple Implications”, John D. Bransford and Daniel L. Schwartz summarise their research group’s findings on what they call a Preparation for Future Learning (PFL) perspective on learning outcomes and learning transfer. They comment as follows (p. 84): “Overall, one of the important lessons of the PFL perspective is that it moves ‘affective’ and social concepts such as ‘tolerance for ambiguity’ (Kuhn, 1962), courage spans (Wertime, 1979), persistence in the face of difficulty (Dweck, 1989), willingness to learn from others, and sensitivity to the expectations of others from the periphery toward the center of cognitive theories of learning. These factors can have a major impact on people’s dispositions to learn throughout their lives.” References in this quote: T. S. Kuhn (1962), *The Structure of Scientific Revolutions*, Chicago: University of Chicago Press; R. Wertime (1979), “Students’ Problems and Courage Spans”, in *Cognitive Process Instruction*, ed. J. Lockhead and J. Clements, Philadelphia: Franklin Institute Press; Carol S. Dweck (1989), “Motivation”, in *Foundations for a Psychology of Education*, ed. A. Lesgold and R. Glaser, pp. 87–136, Hillsdale, NJ: Erlbaum. The primary reference is: John D. Bransford and Daniel L. Schwartz (1999), “Rethinking Transfer: A Simple Proposal with Multiple Implications”, *Review of Research in Education*, vol. 24, pp. 61–100.
- 10 See Margaret Carr (2001), *Assessment in Early Childhood Settings: Learning Stories*, London: Paul Chapman Publishing, pp. 21–47. See also pp. 123–124 for an example of the learning in a technology project in an early childhood centre analysed in these terms as being ready, being willing, being able (having funds of knowledge), and being able (having skills). Being “ready, willing and able” to learn was also used by Guy Gaxton in his 1990 publication *Teaching to Learn* (London: Cassell) in which he argues that “in a society where knowledge, values, jobs, technology and even styles of relationship are changing as fast as they are, it can be strongly argued that the school’s major responsibility must be to help young people become ready, willing and able to cope with change successfully: that is, to be powerful learners” (p. 64).
- 11 Two volumes of papers were published in 2001 and 2003 respectively. These volumes were as follows: Dominique Simone Rychen and Laura Hersh Salganik, eds (2001), *Defining and Selecting Key Competencies*, Göttingen: Hogrefe and Huber; and Dominique Simone Rychen and Laura Hersh Salganik, eds (2003), *Key Competencies for a Successful Life and a Well-Functioning Society*, Göttingen: Hogrefe and Huber.
- 12 H. Haste (2001). “Ambiguity, Autonomy, and Agency: Psychological Challenges to New Competence”. In *Defining and Selecting Key Competencies*, op. cit., chapter 5, p. 94.

- 13 Franz E. Weinert (2001). "Concept of Competence: A Conceptual Clarification". In *Defining and Selecting Key Competencies*, op. cit., chapter 3, pp. 45–65.
- 14 *ibid.*, p. 51.
- 15 Dominique Simone Rychen and Laura Hersh Salganik (2003). "A Holistic Model of Competence". In *Key Competencies for a Successful Life and a Well-Functioning Society*, op. cit., chapter 2, pp. 41–62.
- 16 Mary Jane Drummond (2003). *Assessing Children's Learning*. London: David Fulton, p. 186.
- 17 Margaret Carr (1998a). *Project for Assessing Children's Experiences: Final Report to the Ministry*. Wellington: Ministry of Education. These "key dispositions" are adapted from Margaret Carr (1998b), *Assessing Children's Learning in Early Childhood Settings: A Professional Development Programme for Discussion and Reflection* (support booklet and three videos), Wellington: NZCER, pp. 14–15. For a detailed discussion of the theory and application of learning stories in early childhood settings, see Carr (2001), op. cit.
- 18 Guy Claxton and Margaret Carr (2004). "A Framework for Teaching Learning: The Dynamics of Disposition". *Early Years*, vol. 24 no. 1, March, p. 89.
- 19 The label "mindful", replacing "powerful", was developed during a Ministry of Education Teaching and Learning Research Initiative project (2004–05) entitled Key Learning Competencies across Place and Time/Kimihia te Ara Tōtika Hei Oranga mō tō Ao. See also Ellen J. Langer (1989), *The Power of Mindful Learning*, New York: Addison Wesley.
- 20 Urie Bronfenbrenner (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge, Mass.: Harvard University Press, p. 205.
- 21 This review was published in detail as "Assessment and Classroom Learning" in the journal *Assessment in Education*, vol. 5 no. 1 (Paul Black and Dylan Wiliam, 1998a). A summary, entitled *Inside the Black Box*, was published in the same year (Black and Wiliam, 1998b), and a book about putting the ideas into practice in schools was published in 2003 (see note 27 below). The ideas in the book were summarised in Paul Black, Christine Harrison, Clare Lee, Bethan Marshall, and Dylan Wiliam (2002), *Working Inside the Black Box*, London: School of Education, King's College. The relevant references are listed below as notes 23, 25, and 28. The research study on tasks referred to here is as follows: Carole Ames (1992). "Classrooms: Goals, Structures, and Student Motivation". *Journal of Educational Psychology*, vol. 84 no 3, pp. 261–271.
- 22 Paul Black and Dylan Wiliam (1998b). *Inside the Black Box: Raising Standards through Classroom Assessment*. London: School of Education, King's College, p. 2.
- 23 *ibid.*, pp. 3 and 4.
- 24 Black and Wiliam (1998a), p. 31.
- 25 Black and Wiliam (1998b), p. 13.
- 26 *ibid.*, p. 9.
- 27 Paul Black, Christine Harrison, Clare Lee, Bethan Marshall, and Dylan Wiliam (2003). *Assessment for Learning: Putting It into Practice*. Maidenhead, Berks.: Open University Press, p. 46.
- 28 Black and Wiliam (1998b), p. 9.
- 29 *ibid.*, p. 14.
- 30 Black and Wiliam (1998a), p. 24.
- 31 Black and Wiliam (1998b), p. 12.
- 32 *ibid.*, p. 10.
- 33 *ibid.*, p. 15.