Three lenses

Ngā tirohanga e toru

These books on symbol systems and technologies for making meaning employ three lenses to analyse the exemplars:

- a lens focused on assessment practices, referring to the definition of assessment as "noticing, recognising, and responding" from Book 1 of *Kei Tua o te Pae*;

- a *Te Whāriki* lens;

- a lens that focuses on the symbol systems and technologies for making meaning – literacy (oral, visual, and written), mathematics, the arts, and information communication technology (ICT).

An example of assessments using the three lenses

He tauira aromatawai e mahi ana i ngā tirohanga e toru

In Book 4 of this series, "Jak builds a wharenui" is an exemplar of children making a contribution to their own assessment.

Jak builds a wharenui.

Jak approached me in the back room and asked if I could help him build something. We sat down together and talked about what he would like to build. Jak started to put a base down. "What could this be, Maya?" Jak asked me. "I'm not sure, but maybe it's the floor of a building," I replied. "Look around you, Jak. What could this be?"

Jak carefully looked at the pictures on the wall. "I know, it can be a Māori house," he said. "Do you mean a wharenui?" I asked. "Yes," he said, pointing to the photos on the wall. I brought out my book *New Zealand Aotearoa* by Bob McCree. Jak looked through the book. "My wharenui has lots of people, like the picture." Jak used the tall rounded blocks as people. "Why does it have a triangle pointy roof?" Jak asked. I explained to Jak that the wharenui was like a person and the posts on the roof were its back and spine, with lots of bones so it's strong and can stand. Jak continued to ask, "So it's like a skeleton?"

Jak did a lot of problem solving during this learning experience as he had to work out how he was going to balance the "ribs" so they could stand up and be pointed. Jak tried all sorts of blocks and decided to build a tall pile in the middle so that the ribs could lean on them.

Analysis from a lens focused on assessment practices

Jak uses pictures as a reference point against which to assess his construction for himself: he is able to make his own judgment about the quality of his block building. The ambitious design also provides its own evaluation: the roof, delicately balanced to come to a point, doesn't collapse. This is an example of self-assessment. It is also an example of the teacher writing down an occasion when she says "I'm not sure", modelling for Jak that being uncertain is part of the process of learning (and teaching). She includes her own voice here, setting the assessment in the context of the interaction between teacher and learner. The teacher and Jak have recognised the opportunity for the photos on the wall and in the book to add meaning and complexity to Jak's building. The teacher's responses to Jak's questions contribute to the meaning making, and she records the episode so that it can be revisited.

Analysis from a lens based on *Te Whāriki*

This is an exemplar of learning that is distributed across or "stretched" over people, places, and things: the teacher, the place (in this case the photograph of a place), and the things (the blocks). Jak appears to be exploring how three-dimensional objects can be fitted together and moved in space, also ways in which spatial information can be represented in photographs and used as a guide for building. Jak uses analogy (it's like a skeleton) to make sense of the teacher's explanation. This exploration is what architects do and, in this case, what traditional Māori architects do, following the pathways and designs of those who have gone before. It may be that this event will be followed by a trip to a wharenui, or a visit from a Māori elder to explain more about the symbolic nature of the architecture and the whare whakairo, strengthening the view that Jak belongs in a wider bicultural world.

Analysis from a lens focused on symbol systems and technologies for making meaning

As Hirini Melbourne has explained above, exploration of the wharenui is an opportunity to introduce the language and symbolism of whakairo. Here, Jak is calling on an example of written literacy – a book – to add to his knowledge, as well as referring to a photograph on the wall. He asks, "Why does it have a triangle pointy roof?", and the teacher replies in terms of the symbolism of the design rather than the spatial mathematics of architecture; however, Jak is also exploring for himself the strength of a triangle as an element of architecture.

Focusing the lens on assessment practices

He āta titiro ki ngā mahi aromatawai

> Exemplars are examples of assessments that make visible learning that is valued so that the learning community (children, families, whānau, teachers, and beyond) can foster ongoing and diverse learning pathways.[13]

Book 1 of *Kei Tua o te Pae* defines documented and undocumented assessment as noticing, recognising, and responding. The first nine books of *Kei Tua o te Pae* provide some guidelines about what assessment to look for. They are assessments that:

- include clear goals (Book 1, page 9);
- are in everyday contexts (Book 1, page 12);
- protect and enhance the motivation to learn (Book 1, page 13);
- acknowledge uncertainty (Book 1, page 14);
- include the documentation of collective and individual enterprises (Book 1, page 16);
- keep a view of learning as complex (Book 1, page 18);
- follow the four principles of *Te Whāriki* (Book 2);
- are on the pathway towards bicultural assessment (Book 3);
- provide opportunities for the children to contribute to their own assessment (Book 4);
- provide opportunities for family and whānau to participate in the assessment process (Book 5);
- make a difference to: community, competence, and continuity (Books 5, 6, and 7);
- include infants and toddlers (Book 8);
- reflect and strengthen inclusion (Book 9).

Focusing the lens on *Te Whāriki*

A broad definition of the learning of symbol systems and technologies is provided by one of the goals in the *Te Whāriki* Communication/Mana Reo strand: "Children ... experience the stories and symbols of their own and other cultures."[14] However, the learning that these four books focus on is not confined to this strand. The Exploration/Mana Aotūroa strand includes becoming competent with a range of tools for pretend, symbolic, or dramatic play. Listening to stories and using books as references are ways in which children learn strategies for active exploration, thinking, and reasoning. Another way is representing ideas and discoveries using creative and expressive media and the technology associated with them. In an exemplar in Book 18, a child, Jake, represents the data from a survey in picture form. Children develop working theories about the world from familiarity with stories from different cultures. Spatial understandings are often derived from maps, diagrams, photographs, and drawings. Children learn to "read" photographs at a very early age. Children learn about Contribution/Mana Tangata and social justice from a range of experiences with symbol systems and technologies, for example, reading stories and allocating "fair" shares using mathematics. Stories frequently encourage discussions about another's point of view. Multiple literacies have a place in the Belonging/Mana Whenua strand. They provide connections with the wider world of family and community, as the above example from Hirini Melbourne illustrates. This is what the rest of the world does – tells stories, makes pictures, writes, reads, uses symbols, maps, numbers, and so on. In Book 20, children use ICT to strengthen these connections: faxes and emails connect them with their families at work. Families send their children's learning stories electronically to extended family across the world.

In Book 5, the exemplar "Sharing portfolios with the wider community" shows how an invitation written to residents in a nearby hospital widens the local community. Learning and being immersed in the cultures' symbol systems and technologies for making meaning can be demanding. It requires a particular capacity to pay attention, maintain concentration, and be involved over time (a feature of the Well-being/Mana Atua strand).

Dimensions of strength

The ways in which assessment contributes to the strengthening and continuity of learning over time are discussed in Book 10. The possible pathways for learning that derive from the principles of *Te Whāriki* have a role to play in these five books as well. The principles (holistic development, relationships, family and community, and empowerment) can provide a guide for identifying dimensions of strength as children become more interested in and involved with literacy, mathematics, the arts, and ICT practices. Possible pathways associated with the use of symbol systems and technologies include:

- stronger integration into recognised patterns, regular events, and social practices ("Flopsy and Mopsy" in Book 17, for example);

- distribution across a widening network of helpful people and enabling resources ("Ezra explores height, balance, measurement and number" in Book 18, for example);

- connection to a greater diversity of social communities ("Rangitoto" in Book 19, for example);

- mindfulness as children begin to take responsibility and develop their own projects ("The photographer at work" in Book 20, for example).

These pathways are discussed on pages 9–10 of Book 10.

Ezra measures Eisak.

Focusing the lens on symbol systems and technologies for making meaning

He āta titiro ki ngā tohu whakahaere me ngā momo hangarau hei whakamārama

The sociocultural framework that informs *Te Whāriki* (see Book 2) is a useful perspective for understanding the teaching and learning and assessment of symbol systems and technologies in the early years.[15] Young children learn languages, literacies, symbol systems, and communication technologies by participating in them in a range of family and community contexts (including early childhood settings outside the home), where the purposes and ways of "doing" literacy, mathematics, the arts, and ICT are as varied as the contexts themselves.[16] This view has far-reaching and important consequences for the way we go about

Daniel and his books.

assessment for learning because it acknowledges that competence is not just a matter of cognitive ability. Competence is about "access and apprenticeship into institutions and resources, discourses and texts".[17] It also depends on how much the knowledge, skills, and interests children acquire from their families and communities are recognised and valued by educators within early childhood settings. Assessment practices will include making connections with family and whānau.[18] Books 1–9 of *Kei Tua o te Pae* (see especially Book 5) illustrate how narrative assessment can be particularly effective in creating opportunities for families to share their literacy and communication practices with teachers. When family members read stories about practices that involve their child in early childhood settings, they will often be prompted to describe related experiences going on within the family context. They may also let teachers know about the symbol systems and technologies they value.

The exemplars selected for these books have been chosen to reflect a diversity of interests and practices. They are also about assessing children at times when they are active participants in everyday events and real-life situations that are meaningful to them. Wherever possible, narratives that feature the sharing of expectations and practices across contexts such as home and centre have been included. This enrichment of the knowledge in an early childhood setting with "funds of knowledge"[19] from the children's homes contributes to the "noticing, recognising, and responding" process that is formative assessment (see Book 1).