Special
Issue

Assessment in ECE

PLUS:

Extending children s thinking •

Place and ecological identity •

A history of e.c.e. policy •

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Sharpening Te Whāriki?

Her prac had been difficult and the student was venting. Her final point was her most impassioned: 'And they don't even follow *Te Whāriki!* They said it was outdated and they didn't need to follow it. But,' she said emphatically, 'when ERO came through *Te Whāriki* was everywhere!'

This small vignette illustrates two recurring theme in early childhood education (e.c.e.). One is well known in teacher education: that because of their weeks of presence in a centre and their relatively low status, student teachers can find themselves witnessing noncompliant practices as well as efforts to disguise this. The other is more subtle: how can new insight and old wisdoms co-exist? More particularly, how can *Te Whāriki* have enduring qualities and yet remain open to new change?

Looking back over the history of early childhood education in this country, Professor Helen May has noted a recurring pattern in which innovations arise to challenge the existing orthodoxy and then, given time, the innovations become the new orthodoxies; and the cycle continues. Now aged 20 years old, *Te Whāriki* – the world's first national curriculum for e.c.e. and NZ's oldest unchanged curriculum – has become an orthodoxy even while it is less than fully understood, and nor is it being fully implemented, according to recent national ERO reports.

One of our editors (Claire) has been privileged to be one of the group who have been charged with revising *Te Whāriki* in recent weeks. Claire has experienced first-hand the inevitable tension between revising a curriculum around existing principles, strands and goals, re-focussing learning outcomes and assessment for a contemporary learning environment, and ensuring that sufficient guidance is given to teachers to ensure that they can support the diversity of learners in early childhood settings while using a wider range of assessment methods to assess children's learning. We will look forward to seeing the draft that is out for consultation in the near future.

While we await the outcome of revision of *Te Whāriki*, this issue of Early Education with its strong focus on assessment in e.c.e. is timely. It also means close encounters with 'learning stories' – which have become an orthodoxy arising alongside *Te Whāriki* i. It also requires us to encounter again the concepts of 'quality' and 'setting standards' – who decides what is 'good enough'?

Katrina Foster and Tara McLaughlin provide us with both the broad brush of the literature review of what constitutes 'quality' assessment, as well as pithy take away messages for professional discussion. Theirs is clearly an attempt to maintain and extend the professional 'conversations' about learning stories. Drawing on initial findings of her Ed.D studies, Monica Cameron's survey of e.c.e. teachers indicates that there are major challenges in giving sufficient time to 'learning stories' to ensure that they are provide meaningful insight into how and a what a child is learning. One of the expectations of learning stories is that parents will participate in the process, and to provide an authentic test for the accuracy of the teacher's assessment. This is often difficult to achieve. However, Lynda Hunt's research into 'learning snapshots' shows that they have significantly raised parental participation in a kindergarten community. 'Working theories' are also a key aspect of sociocultural assessment, and Jo Perry has set herself the challenge as an academic to 'self study' how working theories are evident in an early childhood setting where she was volunteering.

We are reminded of the big picture, especially how the 'global' is understood in the 'local'. Glynne Mackey proposes that encouraging e.c. student teachers to recognise their personal connections to 'place' can help build their commitment to ecological sustainability. Clare Wells takes us back through the politics that have shaped e.c.e.

We are grateful for the diversity of contributors and are reminded that within the even wider diversity that is the e.c.e. community, *Te Whāriki* is one of the few initiatives that glues us together. Hopefully the new version of *Te Whāriki* will enable new insight to burst through while maintaining the diversity of provision that exists in the sector. It might even inspire a compliance-aware but *Te Whāriki* -adverse e.c. staff to opt in.

Meanwhile, here's a reminder that to do the hard work, we need the right tools in place:

He rei ngā niho, he paraoa ngā kauae
(A whale's tooth in a whale's jaw)

Ngā mahana kia koutou katoa -

Claire McLachlan and Sue Stover

Editors

Letter from Manchester, England

Dear friends in early childhood education

I am driven to understand how English early years education policy is formulated and the rationale for its durability. That drive has taken me to Germany and New Zealand, as a Winston Churchill Travelling Fellow. I am now back in Manchester, England reflecting on my travels which surpassed my initial hopes, aims and objectives. The welcome that I received, coupled with the enthusiasm for my topic enriched the experience and for this, I express my sincere gratitude to all who made this possible.

To devise my objectives for the Fellowship, I firstly needed to understand the frustrations that I felt as a practicing teacher. It appeared to me that child-centred approaches in early years' classrooms in schools were at best tolerated due to the multitude of pressures that practitioners are constantly juggling.

Play, interest-led activities, secure base, with time to explore are basic facets often evident in an English early years system but are potentially compromised by the current neoliberal accountability culture which serves to oust the child from the centre of pedagogical intent. Furthermore, government-directed policies take time to digest but this is not always possible in what is an immensely demanding practice.

I commenced a Master's Degree in Education with the aim of exploring these issues for myself. I questioned the efficacy of the statutory assessment practice in local Reception classes. Most unexpectedly, in my research I found clear indicators of teachers welcoming an assessment culture.

When teachers spoke of their rationale for their personal practice, reasons would include getting evidence for Ofsted, (the English inspectorate body). Child engagement, motivation and development were often absent from their rationale for their pedagogical choice. Schools are acutely aware of the implications of Ofsted's grading outcomes, which can gift the status of 'Outstanding' school with 'Outstanding' teachers.

During my six weeks in New Zealand, I visited a variety of early childhood settings as well as two universities that offered early years' teacher education qualifications. The first point of interest was the shift of emphasis: children were being viewed as competent and capable. Systematic developmental tracking systems were not evident. Planning processes were less labour intensive than in England; some settings were writing a daily note; all settings planned for individual children via learning stories. Conversational planning was commonplace, ranging from informal daily conversations to more formal staff meetings, (usually bi-weekly). Planning was less prescriptive than in England and usually dispositions rather than curriculum or subject-focused.

My observations increased in significance when I visited Otago University, home to the longitudinal Dunedin Study. Here we discussed current research that cited self-control above IQ and family background as being more significant in determining the life outcomes for young children. For me, this challenged the centrality of externally defined knowledge *per se* to be the primary tenet for successful life outcomes.

> ## *I found that New Zealand teachers were clearly active participants in their own professional development and in contributing to policy formation in their settings*

During my travels in New Zealand, I noted that curriculum subjects were accorded little or (more usually) no attention in planning, either in learning stories or discussion. Although I had conversations around this, I did not ascertain a clear rationale for their absence. I presume that practitioners felt that 'curriculum subjects' were not relevant to the early year's classroom. In a few settings, there was a focus on discreet academic teaching, particularly for children transitioning to school. I learnt that many practitioners had not received any formal training to prepare for teaching literacy and mathematics.

Encouraged by my own research findings, I was interested to observe New Zealand teachers' potential to impart their vision on their teaching environment. I found that New Zealand teachers were clearly active participants in their own professional development and in contributing to policy formation in their settings. The teacher as a researcher with subsequent findings translating to practice was the norm.

Geraldine Leydon in regalia with Winston Churchill in hand.

I think that New Zealand's practising teacher criteria, which requires teachers to participate in ongoing research, is germane to this. I began to understand that this not only fuelled teacher's motivation but it also secured a sense of ownership of practice and an ensuing commitment to it. However, during my visit to a primary school, I noted the introduction of national standards had the potential to compromise the child's central position in planning and practice, despite the school's desire to avoid such a potential.

Pedagogy in the English education system is a tangled web, which is impossible to stand firmly on. It contrasts with the neatly woven mat of the New Zealand Te Whāriki framework. I realised that to be effective in response to local circumstances requires staff to be very skilled and knowledgeable whilst being granted the professional autonomy to allow the knowledge to impact on practice. This privilege appears to be accorded to New Zealand practitioners in their professional journey. Being a reflective teacher in England can be inhibited by numerous externally driven changes in curriculum and assessment practices whilst in New Zealand teachers are largely able to navigate their own journey in a tone and intensity relevant to their circumstances.

I believe that current advances in neuroscience understanding are not yet incorporated into a teaching context in either England or New Zealand. References on courses mostly cover brain development for babies and toddlers. The lack of exploring its potential for the teaching profession has caused me to ask why this might be? Perhaps training providers do not have the authority to devise their own programmes locally or is the potentiality of merging disciplines a process that as of yet seems anathema to the profession?

I am not alone in wishing to explore the potential of neuroscience in educational practice. Teacher knowledge should not be a competition between dispositional learning, neuroscience, curriculum knowledge and skills but rather having a multidisciplinary breadth of expertise, which allows practitioners to respond more effectively to the circumstances that they are in.

As expected, on my learning journey, I witnessed variations in practice between England and New Zealand. A key theme however is applicable to all teaching professionals wherever they may be: that the discipline and practice of teaching is highly complex and cannot be overstated. Teacher expertise including a highly developed multidisciplinary knowledge of child development in its widest sense is paramount in executing the discipline of teaching. Being knowledgeable at government, corporate, community, setting and practitioner level accords authority for each actor to respond effectively locally. This is key to enhancing the long-term life chances of all children wherever they may be.

Remember: ***To constantly weigh a pig does not make it fatter.***

Greetings from the UK,

Geraldine Leydon

The powerful possibilities of ePortfolios

Another letter from the Waikato

Kia ora koutou to my friends and colleagues in the early childhood education sector,

I read with interest the Letter from the Waikato, published in Volume 59 of *Early Education*. The topic of the letter 'ePortfolios' is of particular interest to me as I have recently completed my PhD in this area (Hooker, 2016). The authors note my discussion of parent and whānau engagement (see Hooker, 2015), however this is only a very small snippet of the findings of my research. While I concur with the sentiments of the letter – that early childhood education (ECE) settings need to be thinking about why they are not keeping hard copy portfolios alongside the increasingly common online ePortfolios – there is much more about ePortfolios, and their use in ECE settings that needs to be considered.

Kelly and Clarkin-Phillips suggest that paper-based portfolios are an important artefact for children's learning in an ECE setting, and I agree with this suggestion. However, ePortfolios, if used well, provide deep and rich learning experiences for children. ePortfolios encourage and allow for experiences that their paper-based counterparts cannot. My study found that there are five main areas where ePortfolios made a difference to children's learning:

- Positive changes to teachers' formative assessment practices.

- Increased collaboration and co-operation between teachers, teachers and parents/whānau, and teachers and children.

- Greatly increased parent and whānau engagement with their children's learning.

- Development of a strong community of practice.

- Learning benefits for children.

The extent to which teachers' formative assessment practices were impacted on through the introduction of ePortfolios in the ECE setting in my study was astounding. The frequency of entries in the ePortfolios increased dramatically, and entries responded directly to children's learning experiences. The stories the teachers were writing in the ePortfolios became learning stories in the truest sense – the teacher noticed the learning, recognised it as learning, responded to the learning **and** involved other teachers, parents, whānau and children in the learning, effectively revisiting the learning. This led to the greater collaboration and co-operation noted above.

Conversations about children's learning and how to support and extend the learning between teachers had become more collaborative, and were no longer limited to staff meetings. Teachers noted that they were reflecting on what their colleagues had written prior to completing a new learning story. This meant that there was no longer a 'doubling up' of documentation; more joint Learning Stories were being written (by two or more teachers) and teachers were seeing children's learning through each other's different lenses. Parents and whānau became visible in children's learning, adding comments and their own stories to their children's ePortfolios. This is something that very rarely happened in the paper-based portfolios, and I would suggest that the difficulty of getting parents/whānau to contribute to paper-based portfolios is a common frustration in the ECE community. Towards the end of the study the trend for teachers' in this ECE setting to include children in their assessment documentation in ePortfolios was noteworthy. By enabling children to become part of their learning journey through becoming co-constructors of that learning, that is, engaging in self-assessment, the fundamental tenets of formative assessment are achieved (Black & Wiliam, 1998a, 1998b). All of these things saw the development of a strong community of practice in the ECE setting, one in which all members of the ECE setting played an important part in their shared practice – children's learning.

The final point made by Kelly and Clarkin-Phillips is about the intentions of ePortfolio providers. They suggest that ePortfolio providers can influence the ways in which assessment is documented. This is indeed true and caution is needed here. The provision of a template is a salient feature of a quality ePortfolio system – but **only if** it is designed and updated regularly in collaboration and consultation with the early childhood education profession and current research.

There are dangers in using an ePortfolio system that is not informed by sound theoretical, research based and practical ideas on teaching and learning, as the key factors of formative assessment may be compromised.

I believe that educational portfolios, in whatever format are vital artefacts in early childhood education. They support and extend children's learning, allowing them to revisit their learning, and further develop the learning. ePortfolios address the limitations of paper-based portfolios – they are accessible, portable, encourage parent and whānau contribution (particularly from family members who live in a different town, city or country), support strong formative assessment and are multimodal (including video and sound recording). Today's children are technology savvy. The image discussed by Kelly and Clarkin-Phillips of siblings looking at their paper-based portfolios in Carr and Lee (2012) is delightful and, they suggest, shows how infants and toddlers can use portfolios - but this is not limited to paper-based only. There are several clips on YouTube which show very young children confused by magazines and books – these children are used to iPads and tablets, and these children, the children of today and of the future, would be able to have meaningful interactions with their learning through ePortfolios.

My study raised ten questions that ECE settings must consider before implementing ePortfolios.

1. Does the ECE setting have the required internet access to support ePortfolios (i.e. wireless and sufficient data allowance)?

2. Will the setting have sufficient technology available for children to access their ePortfolios whenever and wherever they want to, unassisted?

3. Will the technology available allow several children to access their ePortfolios at the same time?

4. Will the ECE setting involve children in selecting the documentation to be uploaded to their ePortfolios, as the teachers in the ECE setting in this study were beginning to do?

5. Will children, parents and whānau be supported to add documentation which contributes to an authentic learning journey?

6. Is the ePortfolio platform based on sound educational research which promotes the essential aspects of formative assessment and is framed around key learning outcomes and opportunities to learn?

7. How will parents and whānau be supported to interact with the ePortfolios alongside their children and the teachers?

8. Will the ECE setting provide opportunities and equipment for parents and whānau who do not have the required technology to access their children's ePortfolio on an equitable basis?

9. Will the ECE setting provide sufficient technology

Online assessment provides opportunities for sharing children's learning wherever the internet can reach, as well as sharing with the child whose story is posted.

for the teachers to access ePortfolios wherever they are in the setting, or allow them to use their own devices utilising the service's internet?

10. Will the teachers be supported with relevant and worthwhile professional development so that they can implement ePortfolios to their full potential?

These questions require serious consideration when contemplating whether to implement an ePortfolio system into an ECE setting and I would encourage settings to involve their community in the decision making process, as the introduction of ePortfolios has consequences, positive and potentially negative, for all.

Ngā mihi nui

Tracey Hooker

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Quality assessment in early childhood

A reflection on five key features

Katrina Fraser and Tara McLaughlin

Swinging from a predominantly developmental approach in the 1990s to a sociocultural approach in the new millennium, assessment in early childhood eduation (ECE) has undergone a substantial shift in focus (Turnock, 2009). 'Learning stories', a form of narrative assessment which are identified as socioculturally-based and aligned to the early childhood curriculum *Te Whāriki***, are now the most commonly used form of assessment in ECE in Aotearoa New Zealand (Mitchell, 2008).**

A side effect of learning stories' dominant use, however, is that other types of assessment are now less frequently used. This has led to concerns about the narrowing viewing of assessment within the early childhood sector from being one that embraces quality assessment practices including learning stories to one that assumes quality assessment is learning stories (Blaiklock, 2010; Loggenberg, 2011; McLaughlin, Cameron, Dean, & Aspden, 2015). Furthermore, a review by Aotearoa New Zealand's Education Review Office (ERO) (2007) found that while good assessment practice was occurring in ECE settings, assessment quality overall was variable between and within centres.

In light of this emerging discourse on assessment, this article examines both international and local literature to define what is meant by assessment and to discuss the importance of supporting quality assessment practices. We offer no quick solutions or answers, but rather we aim to outline key features of quality assessment and offer considerations for early educators.

What is Assessment?

Assessment is the process of gathering evidence about children's learning, summarising, analysing it, and then using the knowledge gained from this process to further children's learning (Drummond, 2012). Assessment is integrally linked to curriculum; *Te Whāriki* describes the assessment process as observing 'changes in children's behaviour and learning and… [linking] these to curriculum goals' (Ministry of Education, 1996, p.29). Assessment evidence might include observations such as running records, anecdotes, time samples, video recordings and checklists, or collecting photographs and samples of children's work (Arthur, Beecher, Death, Dockett & Farmer, 2012). Summarising and analysing assessment evidence might involve drawing on professional knowledge to interpret learning and recording it through a learning story, curriculum learning outcomes or annotations of children's work.

Information gained is used to extend children's learning through the planning of responsive learning experiences, the effectiveness of which are later evaluated by educators (Ministry of Education, 1996).

Engaging in Discussions of Quality

As Mary Jane Drummond (2012) explains, when we begin to examine assessment we begin to investigate the very nature of why we do what we do as educators. What is it that we are teaching children and why? How do we know what they are learning?

Assessment has a deeply moral basis because we are making judgments about children, and what we choose to communicate through assessment influences children's emerging identities (Carr & Lee, 2012). It is therefore an important ethical aspect of our practice that we provide quality assessment for the children we teach. Yet, quality itself is a difficult notion as our understanding of quality is not static and reflects context (Dahlberg, Moss & Pence, 2013). Nonetheless, identification of key features from the literature for what constitutes quality assessment practice can help provide guidance to educators.

Key Features of Quality Assessment

In our literature review, we identified five recurring features of quality assessment:

- Clarity of purpose,

- Use of multiple methods,

- Meeting standards of crediblity and trustworthiness,

- Promoting equity, and

- Establishing a strong body of documentation.

Clarity Of Purpose

The key to quality assessment is that teachers should know their intended purpose for engaging in assessment and to use the methods that fulfill that purpose with a view to benefitting the children who are at the centre of the assessment process. While quality assessment practice should always benefit children, assessment can occur for multiple reasons:

Purpose 1: To improve teaching and learning. In Aotearoa New Zealand, learning stories are often considered to be a formative assessment process; that is, teachers use the assessment information in ways that enhance teaching and learning. However, if a learning story is used to gather evidence and summarise what children know or have learned, then it has been used as a summative assessment. Educators need to carefully consider how information that is gathered is used to inform future learning and teaching.

Purpose 2: To share learning. Another important reason for assessment is to measure children's learning against the goals of curriculum to share educationally significant information with children and their families/whānau (Carr & Lee, 2012; Snyder, McLaughlin & McLean, 2014). In Aotearoa New Zealand, the goals of *Te Whāriki* are largely dispositional and achieved through social participation (Cooper, Hedges & Dixon, 2013). However, learning stories have been criticised for their focus on assessing dispositions in children's learning to the exclusion of subject content knowledge (McLachlan, Edwards, Margrain & McLean, 2013). Anne Smith (2013) noted that because *Te Whāriki* is non-prescriptive and based on dispositional learning, the use of learning stories as an assessment method aligns well with the goals of the curriculum. Yet, assessing the specific learning outcomes of *Te Whāriki* might require multiple methods of assessment to ensure that specific areas of children's learning are not missed (Blaiklock, 2013).

Purpose 3: To identify when children require early intervention. Another purpose of assessment practice is to identify children who may need specific intervention to reach the goals of the curriculum (NAEYC, 2003). Each child has a right to education as stipulated in the United Nations *Conventions on the Rights of the Child* and teachers have a duty of care to identify children who have needs that prevent them from accessing their right to a full education (McLachlan et al., 2013). Focusing on children's strengths is vital and narrative assessment methods such as learning stories can illuminate strengths and document meaningful learning for children with special needs (Ministry of Education, 2009a).

At the same time, identifying needs (sometimes labelled as a deficit-approach) is also an important means of

ensuring equity for young children and a balance between approaches that focus on strengths and identifying needs is required (McLachlan et al., 2013).

Use Of Multiple Methods

When educators have a range of assessment methods to draw on, they can identify the method that is most efficient and appropriate for their intended purpose of assessment. Moreover, multiple methods of assessment can gather a diverse range of documentation that may provide a more balanced picture of a child's learning and development, rather than depending on a single assessment method (McLachlan et al., 2013). For example, in addition to learning stories in ECE, assessment might include copies of children's work annotated (or not) by educators, checklists and anecdotal records (Loggenberg, 2011; Podmore & Luff, 2012).

Meeting of Standards of Credibility and Trustworthiness

Because the performance of young children can be inconsistent and affected by various contextual influences, ongoing assessment to establish patterns of performance is a must to ensure credibility of information gathered for this age group (Riley-Ayers, 2014; Cowie & Carr, 2009). To protect children at the centre of the process, it is critical that assessment information is credible and trustworthy. The literature suggests three ways to show this:

(1) Refering to professional standards. Adhering to ethical, professional and legal standards is key to ensuring credibility (Drummond, 2012; Snow & Van Hemel, 2008; Snyder et al., 2014).

(2) Building professional knowledge. Credibility is also enhanced when staff hold sufficient knowledge of assessment. Qualifications provide educators with core skills and knowledge to conduct appropriate assessments and interpret assessment data effectively (Snyder et al., 2014). As only fifty percent of teaching staff in Aotearoa New Zealand teacher-led ECE services are required to be qualified (Ministry of Education, 2015), other forms of professional learning and development will be needed within centres and the sector to support professional knowledge and skills to ensure quality assessment practice occurs.

(3) Gathering multiple perspectives. When assessment includes the views of families/whānau, children and other members of the learning community, they can become active participants in the process, as their knowledge can enrich the teaching and learning process and enhance the trustworthiness of a teacher's evaluation (Cameron, 2014; Carr, 1999; Carr & Lee, 2012; Cooper et al., 2013; Riley-Ayers, 2014). Incorporating the child's perspective can include self-assessment as well as peer assessment (Carr, Jones & Lee, 2005).

It can be argued that families/whānau need some understanding of assessment to empower them to be involved fully in the assessment process (NAYEC, 2003).

Thus, teachers have an important role to play in sharing their professional knowledge with families and in family-friendly ways (Cooper, 2014; Snyder et al., 2014).

Promoting Equity

Assessment methods should be fair for the children who are participating in the process by being responsive to children's diverse characteristics, including age and ability (Snyder et al., 2014). Equitable assessment reflects information about a child's cultural and linguistic background by incorporating knowledge of children's culture and home languages (Carr & Lee, 2012; Espinosa, 2005; NAEYC, 2003; Snow & Van Hemel, 2008). Educators should reflect on how their choices of and in assessment are inclusive of the diverse needs of the children they teach.

In Aotearoa New Zealand, Lesley Rameka's (2012) research on Kaupapa Māori assessment reflects the development of an assessment approach which is culturally inclusive and aims to challenge oppressive practices born out of colonisation. Acknowledging the power of assessment on children's educational outcomes, Rameka's research with Māori ECE centres resulted in an assessment approach that reflects a Te Ao Māori (Māori worldview) framework based on local contexts and key characteristics of Māori culture (see Ministry of Education, 2009b).

Establishing a Strong Body of Documentation

Documentation refers to assessment information which has been formally and informally recorded by educators and/or members of the learning community. Documentation provides evidence of children's learning and development, generates professional discussion among educators, supports communication and dialogue with families/whānau and creates an opportunity for children to revisit their learning and share it with others (ERO, 2007; Podmore & Luff, 2012). In this way, documented assessment becomes a significant artefact in children's learning (Carr & Lee, 2012). In Aotearoa New Zealand, portfolios are a common means of presenting a record of a child's involvement in ECE and these typically contain assessment documentation, such as learning stories (Richardson, 2011). Portfolios can cross the boundaries between home, family/whānau and community (Carr & Lee, 2012). As children revisit and retell their learning stories they are powerfully constructing their identities as learners (Hedges, 2013). Involving children in selecting items of work for their own portfolio has also been found to promote metacognition - 'thinking about thinking' (Laski, 2013).

Two key trends in the use of portfolios and assessment artefacts for portfolios are discussed below.

Trend 1: Photographs. The addition of photographs to assessment has served to increase communication between teachers and children and their families/whānau, particularly those whose first language is not English (Perkins, 2009). However, White (2015) points out that because educators typically take photographs and interpret their meaning on their own, their views may be privileged over those of young children and their families/whānau.

The photographer's decision-making about what to include and what to omit helps normalise certain centre practices (Flannery Quinn & Manning, 2013). The Ministry of Education's *Kei Tua o te Pae/Assessment for Learning: Early Childhood Exemplars* (2004) provides a key resource on enhancing learner identity through the use of photographs in ECE and suggests that children should be more involved in taking their own photographs and interpreting their meaning alongside teachers to mediate the power differential between teachers and children.

Trend 2: E-portfolios. An innovative form of digital technology, E-portfolios enable caregivers and families/whānau to view and contribute to children's learning via the internet (Penman, 2014). Studies in Aotearoa New Zealand show that family/whānau contribution to children's learning can be enhanced significantly through the use of e-portfolios, primarily because assessment is made more accessible (Goodman & Cherrington, 2015; Hooker, 2015). Educators will have an important role to play in maintaining the quality of assessment documentation as centres increasingly embrace e-portfolios to document learning.

Conclusion

Assessment is a core aspect of quality early childhood education (ECE) practice. In recent years, a new discourse on assessment has begun to emerge in the early childhood sector in Aotearoa New Zealand which foregrounds a sociocultural approach (Loggenberg, 2011; McLachlan, et al., 2013; Rameka, 2014; Turnock, 2009). In light of this emerging discourse on assessment, this literature review has considered what this means for educators.

Echoing Monica Cameron's (2014) call for engagement, we encourage educators to engage in discussion around their assessment practice in Aotearoa New Zealand.

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'Assessment in ECE is overwhelming at times'

Uncovering the challenges of assessing four year old children's learning

Monica Cameron, Claire McLachlan and Peter Rawlins

The assessment of children's learning should play a central role in the teaching and learning process.

Yet concerns regarding the quality of early childhood teachers' assessment practices have been repeatedly raised by the Education Review Office (2007, 2013, 2015). But how do teachers experience assessment?

This article presents some of the preliminary findings from a national survey which explored early childhood teachers' understandings, beliefs and practices in relation to assessing four year old children's learning. While a range of perspectives in relation to assessment were evident in the survey responses, this article focuses on the issues and challenges identified by teachers. Some suggestions regarding possible next steps are also made. The findings presented here are a small, but important, element of a larger study. Further analysis of the data collected during both phases is currently being undertaken and additional discussion and dissemination will follow.

Assessment in New Zealand ECE settings

The introduction of the New Zealand early childhood curriculum (ECE) *Te Whāriki* (Ministry of Education, 1996) required the development of assessment approaches which supported the curriculum's underpinning principles (Carr, May & Podmore, 1998). In 1995 a research project was undertaken by Carr and colleagues to develop assessment approaches which aligned with *Te Whāriki*. The resulting narrative based assessment tool was Learning Stories. Since then, ECE teachers have been encouraged and supported to use Learning Stories to assess children's learning by the Ministry of Education (MoE), who produced and funded *Kei Tua o te Pae* (Ministry of Education, 2004/2007/2009), a nationwide ECE assessment exemplar and professional development project based on Learning Stories. Since being introduced, Learning Stories

have quickly become the most commonly used assessment tool in the New Zealand ECE sector. As noted by Mitchell (2008), following a nationwide survey, 94% of teachers reported that they were using Learning Stories to document children's learning.

However, a number of concerns have been raised about the quality of assessment practices in New Zealand ECE settings. In reviewing the effectiveness of the professional development associated with *Kei Tua o te Pae*, Stuart, Aitken, Gould, and Meade (2008) noted that assessment documentation was often more of a 'scrapbook' of children's experiences rather than an analysed account of the learning which children had engaged in and which showed their development over time. In recent years the quality of teachers' assessment practices have also been questioned by the Education Review Office (ERO). In 2007, a national ERO report stated that the quality of assessment practices was inconsistent across and within services. In another national report published in 2013, ERO noted their concern that assessment practices continued to be an area requiring improvement in many services. Such concerns were again noted in a report focusing on transition from ECE services to school, where ERO stated that "assessment records often focused on children's participation in activities, rather than their learning" (2015, p. 17).

While the perspectives of evaluators and ERO are known in relation to assessment, there is less research relating specifically to the perspectives of teachers. As teachers are involved in the day-to-day assessment of children, their perspectives about the realities they face in assessing children's learning needs to be sought and added to the evidence base on effectiveness of assessment of young children in this country. Given that it is teachers who are responsible for assessing children's learning, it is critical that their beliefs, understandings and perspectives are understood in order to comprehend why assessment is happening in the

ways that it is. While research has been undertaken with teachers in relation to the assessment of infants and toddlers (see Schurr, 2009; Turnock, 2009), and by Davis (2006) with teachers in a mixed age setting, this current study has focused on teachers' assessment of four year olds. This is a timely focus, given the MoE's current focus on the need to enhancing the quality of children's experiences as they transition from the ECE sector to the compulsory schooling sector (Ministry of Education, 2015).

Research design

The survey built on the previously mentioned nationwide survey of ECE teachers' assessment practices carried out by Mitchell (see Mitchell, 2008), as well as a more recent survey undertaken by Gunn and Gilmore (2014) which focused on ECE student teachers' beliefs about assessment. To examine the complex and multifaceted topic of teachers' understandings, beliefs and practices a 'quan – QUAL' mixed-methods research design (Punch, 2009) was developed. The study involved a nationwide online survey, followed by interviews with a purposeful sample of people who were particularly knowledgeable about the topic. To include a diverse range of perspectives, reflective of the diverse make-up of the ECE sector, invitations to participate were sent to both teacher-led and parent-led services. The parent-led services included in the survey were Playcentre and Te Kōhanga Reo, which both have their own teacher qualifications. The Ministry of Education (MoE) database was used to source email addresses, with more than 2400 emails sent to people with the required

qualifications inviting them to complete the online survey. The survey included both open and closed-ended questions, and was designed to support respondents to share their understandings, beliefs and practices in relation to assessing four year old children's learning.

A total of 440 responses to the survey were received, with 380 of these responses being included in the final data analysis. A large number of the respondents (53%) identified themselves as holding leadership positions within their services, while 33% were teachers/educators, with the remainder in 'other' or 'relieving' roles. As shown below in Table 1.1, responses were received from 11 different service types.

To participate in the survey, respondents from teacher-led services were required to be qualified and registered teachers. In the parent-led services educators were invited to participated if they held one of the following: the Playcentre qualification of Level 3 (or above), Te Kohanga Reo's qualification of Tino Rangatiratanga Whakaoakari Tohu (or a recognised teaching qualification). Those who choose to complete the survey were, for the most part, experienced teachers. Just 21% of the respondents had been teaching five years or less.

The respondent's highest level of qualification is presented in Table 1.2. Of significance is that the majority of respondents held a Bachelor of Education (Teaching, ECE). In terms of when respondents completed their first early childhood qualification, 10% did so in 1985 or earlier, while

Table 1.1 Composition of survey responses by Service Type

Service Type		Percentage of Responses to Survey	Percentage of Sector
Playcentre		8%	12%
Te Kōhanga Reo		1%	12%
Kindergarten		33%	16%
Education and Care (see detail below)		56%	60%
Other		2%	
Education and Care comprised of:	Māori Immersion	<1%	
	Cook Island Māori and Samoan 'language nests'	<2%	
	Montessori	3%	
	Rudolf Steiner	<1%	
	Correspondence School	1%	
	Corporate Education and Care	3%	
	Private Education and Care	28%	
	Community Based Education and Care	19%	

32% indicated between 1986 and 2000, and the remaining 58% between 2001 and 2015.

Table 1.2 Qualifications of respondents to the survey

Qualification Type	Percentage of Respondents
Playcentre Qualification (Level 3 or higher)	5%
2 year Diploma (e.g. Kindergarten Diploma, PIECCA Diploma etc.)	6%
3 year Diploma of Teaching (ECE)	17%
Bachelor of Education (Teaching) (ECE)	38%
Bachelor Degree in another discipline	2%
Graduate Diploma of Teaching (ECE)	11%
Post-graduate level qualification (e.g. PhD, Masters, Honours)	11%
Tino Rangatiratanga Whakaoakari Tohu	1%
Other	9%

The Challenges: Findings and Discussion

Recurring themes about the challenges and issues relating to assessment noted by respondents included concerns about the quality of teachers' assessment practices and the lack of continuity in assessment practices between the ECE and school sectors. Along with the scarcity of professional development (PD) related to assessment, another recurring theme was the lack of time to assess children and then document that assessment, and the amount of documentation required.

Quality concerns

The survey responses suggest that many New Zealand ECE teachers are grappling with a range of issues and challenges in relation to assessment. Although respondents frequently signalled that they see Learning Stories as a useful and appropriate tool for assessing four year old children's learning, several expressed concerns about Learning Stories and the fact that they are the only assessment tool being used in many ECE settings, many noting that a wider range of assessment tools was needed:

"In numerous ways i.e. not just Learning Stories." – Kindergarten, Head Teacher

Some respondents also documented challenges related to the aspects of children's learning which are being assessed, indicating the wish to employ a wider range of assessment methods in order to effectively assess four year old children's learning:

"I think there needs to be more skills based assessment with a focus on identifying areas that a child excels in 'and' (a big

AND) things they struggle with and may lag behind so they can be given the support they need to improve!" – Private Education and Care Setting, Reliever

How these challenges and issues can and should be addressed is less clear; many respondents explicitly stated that they did not want to see 'school like' assessments, standardised tests or checklists being used to assess four year old children's learning in ECE settings:

"I do not believe in checklists or testing of four year olds." – Private Education and Care Setting, Co-ordinating Supervisor

"NOT formal checklists – comparing children is most unhelpful." – Community Based Education and Care Setting, Centre Manager

Some respondents raised concerns that fellow teachers were not consistently engaging in high quality assessment practices.

"From my observation Learning Stories are most often observations that are not necessarily indicating learning as such but documenting an event of some kind. These are often full of errors." – Other, Teacher

"Too many ECE professionals pass off substandard work as Learning Stories and I believe that this belittles our profession….." – Kindergarten, Head Teacher

Continuity between ECE and school

Respondents also indicated concerns relating to the lack of continuity and collaboration between the ECE and school sectors in relation to assessment, as the following responses illustrate:

"Teachers have to write Learning Stories in a way that new entrant teachers are able to read between the lines to understand the child as Learning Stories are not deficit based." – Private Education and Care Setting, Owner/Teacher

"I would like to see more discussion between ECE and Primary sectors about what information is helpful for New Entrant teachers to know about a child as they transition to school." – Kindergarten, Teacher

In light of the need to enhance continuity between the ECE and school sectors (Peters, 2010), it is perhaps not surprising that teachers specifically identified assessment as an area which requires further work. New entrant and ECE teachers need to be supported to engage in ongoing and sustained collaboration if they are to understand each other's approaches to assessment, to build shared understanding and enhance continuity between the sectors.

Working conditions in ECE

When asked to rank five potential barriers to their work, 43.4% identified the amount of non-contact time which they had available to complete assessment documentation as having the most impact on their ability to assess children's learning, as the following responses illustrate:

"*The majority of our Learning Stories within our centre are done outside of our work hours*" – Kindergarten, Head Teacher

"*Learning Stories can be so time consuming to write.*" – Kindergarten, Head Teacher

While the number of teachers identifying this barrier is lower than that identified by Mitchell (2008), where 59% indicated this as the most common barrier, issues relating to non-contact time remained widespread. When non-contact time is scheduled, the other tasks that need to be completed during this time, interruptions and non-contact being 'lost' due to staff absences were all indicated as factors impact on how long it took respondents to complete Learning Stories.

"*We only have one day a month (non-contact) rotating 1 staff a week.*" – Te Kōhanga Reo, Head Teacher

"*I often fill in when teachers are sick so my non-contact is not happening.*" – Privately Owned Education and Care setting, Supervisor

Further illustrating the challenges of time, time to assess children was acknowledged by 42.9% of the respondents as having the most impact.

"*It [assessment] is essential but often the number of children daily makes it difficult to do it meaningfully.*" – Kindergarten, Teacher

"*Many of my peers find assessment very stressful due to time restraints. So assessment is rushed and not necessarily quality.*" - Community Based Education and Care Setting, Teacher

It is clear that time, and specifically the lack of it, is a significant issue for many ECE teachers. Learning Stories are a time consuming approach to assessment (Carr, 2001), and along with the ongoing intensification of teachers' work (Apple, 2004), it is not surprising that administration requirements and workload have been identified as causes of stress by New Zealand ECE teachers (McGrath & Huntington, 2007).

Respondents also indicated that the amount of assessment documentation required of them is also an issue.

"*Assessment is fine. All the time that goes into the written assessment for the parents is a waste of time. All the parents want to see are pictures of their children.*" – Montessori, Co-ordinating Supervisor

"*I don't believe that occasions of learning should have to result in an A4 typed document with inserted photos as the exemplars lead us to believe.*" – Playcentre, Co-ordinating Supervisor

Expectations

Some respondents specifically noted the impact of MoE and ERO assessment expectations, along with those of their own setting, as driving the amount of assessment documentation they were engaging in.

"*Assessment of children's learning is important – the focus on formal documentation is not. …. Accountability to the Ministry has become an overwhelming factor in the amount of time we*

spend on providing documentation." – Kindergarten, Teacher

It is however worth noting that while the 2011 ECE Licencing Criteria (Ministry of Education, 2014) requires services to engage in assessment, planning and evaluation, no regulations govern how this should happen, what tools should be used, or how often teachers should be engaging in these practices. As pointed out by Blaiklock (2010), teachers are not required to use Learning Stories.

Professional development

The call for increased access to funded Professional Development (PD) specifically related to assessment was a repeating theme throughout the survey. In the 12 months prior to completing the survey, 49% of respondents indicated they had participated in five hours or less of assessment related PD, with 28% having two hours or less. This likely reflects reduced funding coming into ECE to enable professional learning:

"*I think that the ece sector has been disadvantaged by [the] reduction in professional development opportunities over past years.*" – Kindergarten, Head Teacher

Calls from the sector for more access to PD are not surprising in light of the removal of MoE-funded PD for the ECE sector in 2009 (Ministry of Education, 2009; McLachlan, 2011). These changes, in conjunction with the fact that there have been no MoE funded publications or resources relating to ECE assessment practices since *Kei Tua o te Pae*, has left teachers without access to support and new information.

Limitations

Constraints are associated with the use of survey as a research method because only the views of those who choose to participate are included. While 380 survey responses have been included in the data analysis, this is a small proportion of responses in comparison to the 16,900 teachers working in ECE settings (Education Counts, 2014), and an unknown number in parent-led services. As shown in Table 1.1, response rates to the survey were not proportional to the make-up of the ECE sector itself, with some service types being over represented and others under represented. There were no responses from teachers in Hospital Based Services, or from Tongan, Niuean, Fijian, or Tokolauan Language Nests. While the number of responses to the survey from Education and Care services was similar to their proportion of the sector as a whole, this was not the case for others. The responses from Playcentre and Te Kōhanga Reo are significantly under-represented while kindergartens were significantly over-represented in the responses. While the study being reported here relates specifically to teachers' understandings, beliefs and practices in relation to assessing four year old children's learning, the findings and implications are likely to have wider relevance for other age groups and settings.

Conclusion and recommendations

It is apparent from the survey responses that ECE

teachers are confronted by a range of issues and challenges as they seek to assess four year old children's learning. Time, both to assess and to document the assessment, was a strong and recurring theme for a large number of teachers. The preliminary findings shared here suggest that the current heavy reliance on Learning Stories as an assessment approach needs further exploration given the issues and challenges identified by teachers in the sector.

The concerns voiced by teachers in this survey align with those previously identified by Stuart et al. (2008) and ERO (2007/2013/2015), adding further weight to the existing research into the quality of ECE teachers' assessment practices. Successive ERO national evaluations (see 2007; 2013; 2015) have recommended that the MoE needs to ensure all ECE teachers are accessing professional development in relation to assessment. These recommendations have not been acted upon to date, but the views of the survey respondents clearly support ERO's calls for greater funding of professional development for ECE teachers.

Overall, the survey indicates that there are many challenges and much yet to discuss in relation to the assessment of four year old children's learning. Given that assessment is a core aspect of quality teaching practice (Ministry of Education, 2011) it is vital that the issues identified by teachers and the concerns acknowledged by ERO are addressed.

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Learning snapshots

Enriching assessment by investigating child and family perspectives about learning

Lynda Hunt with Peter Rawlins

As an experienced teacher with a passion for involving families in their child's learning, I have constantly grappled with the difficulty of engaging families and children in assessment practice. With support from 'critical friends' and the Ruahine Kindergarten Association, I set out to investigate how parents and whānau would respond when given unanalyzed photographs – 'learning snapshots' – to share with their children.

The findings of this study suggest that 'learning snapshots' can empower children and families to play a more active role in the assessment of learning. This article discusses assessment in a New Zealand context before outlining the research project, its key findings and potential implications.

Assessment in Aotearoa New Zealand early childhood education

The introduction of the early childhood curriculum *Te whāriki* (Ministry of Education, 1996) resituated early childhood assessment practices into a sociocultural framework. Following the introduction of this new curriculum, the Ministry of Education funded the PACE project (Carr, May & Podmore, 1998) where learning stories were developed as an assessment tool to align with *Te whāriki's* sociocultural underpinnings. Learning stories were intended to make assessment accessible to children and families and invite their perspectives in assessment processes (Cowie & Carr, 2009).

Additionally, the Ministry of Education funded the development of the resource *Kei Tua o te Pae* (Ministry of Education, 2004; 2007; 2009), led by Margaret Carr and Wendy Lee. This resource outlined sociocultural theory in relation to assessment and provided exemplars of learning stories for teachers.

A Ministry of Education evaluation of assessment practice in early childhood, undertaken by Stuart, Aitkin, Gould and Meade (2008), found that despite the Ministry of Education's initiatives to promote sociocultural assessment, there was little evidence of child and family engagement in assessment processes. Children's self-assessment was found to be rarely visible in portfolios and parent contribution was limited to brief summative comment that did not meaningfully inform future learning, despite the core importance of these elements in sociocultural approaches to assessment.

Similarly, a 2008 Education Review Office (ERO) report found that teachers' perspectives dominated assessment practice in early childhood settings. Though some parent and child voices were included in portfolios, these did not contribute to teaching practice or children's learning. The report highlighted the importance of increasing the genuine involvement of children, parents, whānau, and other educators in the assessment of children's learning. A more recent report noted that many services needed to improve the way that they identify parent, whānau and children's views and priorities and how they respond to these in assessment practice (ERO, 2013).

The low level of engagement of families and children in assessment practice raises critical questions about the barriers for family and child participation. Recent studies highlight that the barriers include:

(1) a mismatch between parents and teachers' perceptions about the role of learning stories (Lim, 2012);

(2) the unequal power relationship between parents and teachers (Whyte, 2010) which can lead to parents finding it difficult to articulate a different perspective from teachers (Hughes & MacNaughton, 2000; Whyte, 2016);

(3) a lack of guidance on how to engage with assessment; and

(4) lack of time that busy parents have available to become involved.

In addition, timing can be seen as an issue. Noting the delays that typically occur between writing learning stories and sharing them with families, Ken Blaiklock (2010) suggested these delays can limit opportunities for parents to discuss learning when this is most significant for their child.

If parent and whānau participation in assessment is going to be achieved, Herman Knopf and Kevin Swick (2007) suggest a paradigm shift is needed – teachers need to work towards a more 'family-centric' perspective.

Research design

Initiating Parent Voice (IPV) is an assessment format that gives a lead voice to children, parents and whānau. Marjolein Whyte (2010) found that using IPV early in the

assessment process resulted in increased contribution from parents and, importantly, increased formative assessment offered by parents to teachers. She suggested that IPV empowered children and validated assessment, making planning for learning more collaborative, authentic and meaningful.

I was keen to explore family perceptions about using the IPV form that Marjolein Whyte had developed (2010). To simplify the name of the IPV, I changed this to a 'learning snapshot' and settled on the question of inquiry:

> *In what ways can inviting child, parent and whānau perspectives using learning snapshots enrich interpretations of children's learning?*

I carried out this research project in the kindergarten where I teach over a six-month timeframe in 2013-2014. The kindergarten is licensed for 40 three- and four-year-old children, is staffed by five qualified teachers and serves a diverse urban community. During this research, learning stories were used to document each child's learning in paper-based assessment portfolios.

This qualitative study utilised a multiple case study design (Yin, 2009). Informed consent was gained from all participants and pseudonyms have been used to ensure their anonymity.

Method

Six four-year-old focus group children and their families participated in this research. When teachers noticed these children engaged in learning at kindergarten, they took photos of their involvement. Three or four photos were then digitally inserted in a learning snapshot form, printed out and given to the child or family when they went home. Five of the six families opted to receive paper copies of the learning snapshot and one parent preferred to have learning snapshots emailed.

Each learning snapshot included this invitation to support family discussion at home:

> *These photos show … engrossed in an interest at kindergarten. Can you please discuss these photos with her/him to find out more about what she/he was doing, how she/he found this and what she/he would like to try next? What do you notice about your child in these photos? Do the photos link with something she/he is interested in at home? We would love you to write down the ideas that come from your discussions and share your ideas about ways to build on this interest at home or at kindergarten.*

When learning snapshots were returned with written input from parents, whānau and children, they often sparked conversations about learning between teachers, parents and children. Returned learning snapshots were shared with the teaching team, discussed in planning meetings and used to inform future learning. The learning snapshot was added to the child's portfolio. Over the research period, 72 learning snapshots were completed. All focus group families were active in completing learning snapshots over the research

period, and the overall return rate was 80%.

Data about how the families found using learning snapshots was gathered through a survey after ten weeks and through an exit survey when each child left for school. Five families also took part in a focus group interview where they shared experiences and thoughts about learning snapshots. Additional data was gathered from the teaching team through a survey, discussions and a focus group interview.

Findings

Data from the focus group interview was transcribed and integrated with the data from the surveys. The following six themes emerged:

(1) The ease of use encouraged family engagement

Families said they found the learning snapshots easy to use. The 80% return rate of learning snapshots suggests that this format was manageable for families.

Learning snapshots allowed families to decide what they would share about their child, home context, their cultural or family values and their aspirations. Families could share as little or as much as they wished, making this a non-threatening and meaningful process that tapped into their wealth of knowledge about their child and family.

Families commented on the value they placed on the one-on-one time that they spent discussing learning snapshots with their child.

> *"It's also good to have that 'bonding' time, one on one with a parent."*
>
> Keith's family

(2) Same-day conversations led to richer and more detailed information sharing

The focus group families found the immediate sharing of learning was a key factor that enabled rich same-day discussions with their child. The prompt turnaround of learning snapshots meant children could discuss learning that had taken place at kindergarten with their family on the day it was noticed. Families reported that these same day discussions were more detailed and were met with a more enthusiastic response from their child.

> *"It has to be within a 24hour time slot or he's all over the show with it."*
>
> John's family

One focus group parent could only discuss learning with his child in the weekend, often several days after the learning had taken place. He commented:

> *"The authenticity to what is happening is lost as by the time we review it with her, she's half forgotten."*
>
> Marama's family

The immediacy of the learning snapshot process was

important in gaining an animated response from the child about their learning. A drop off in detail and interest was noticed by families when a time delay of more than 24 hours occurred.

(3) More focused discussions about learning were possible

Families reported that learning snapshots enabled them to move beyond asking superficial questions about their child's day such as 'What did you do?', or 'Who did you play with?' The visual cues in the photographs gave families the opportunity to engage in specific and meaningful conversations about learning. Families spoke about their increased use of leading questions over time.

The conversations prompted by learning snapshots gave families opportunities to give their child specific feedback, to support their ideas and discuss possible new learning goals.

> *"Without the focus of the snapshot at home, it would just be a blur. It's enabled me to give him positive feedback when he's been explaining the learning snapshots (i.e. you're so clever, great ideas etc.) and has also enabled me to question how and why he has achieved what has been portrayed."*

John's family

> *"It helps her show/explain where she was having troubles or struggling and makes it easier for us to talk about how she can improve."*

Aroha's family

Learning snapshots prompted dialogue about learning between teachers, children and families. This dialogue often occurred spontaneously when the learning snapshot was given to the family and when it was returned to kindergarten.

(4) The process empowered children

Families noticed their child's increasing ability to articulate their learning over the research period.

> *"Normally when we ask him about what he did at kindy he*

A learning snapshot

Date: 6/7/16

These photos show Stellan engrossed in an interest at kindergarten. Can you please discuss these photos with him to find out more about what he was doing, how he found this and what he would like to try next. What do you notice about your child in these photos? Do the photos link with something he is interested in at home? We would love you to write down the ideas that come from your discussions and share your ideas about ways to build on this interest at home or at kindergarten.

Many thanks Lynda

Stellan: "I made a Rocket Blast-off Castle. I was using lots of triangles, rectangles and squares to make the house. I used blue, yellow, red, green and orange. I forgot I used orange!"

Janie: Stellan loves building towers and houses with his Duplo blocks (Lego) at home and its great to see him using different building equipment at kindergarten.

Stellan: "I built a bit too high so I had to stand on a chair so I could put a trampoline on. It was a bit difficult to make a trampoline"

Janie: Stellan enjoys building very tall structures and loves the challenge to see how high he can build. It is great to see him using his (or learning) problem solving skills to add his 'trampoline' to the top by standing on the chair.

Stellan: "I'm making a pyramid with triangles"

Janie: Stellan has a keen interest in shapes and numbers. He looks very proud of the big triangles he has made here.

Stellan: "This is the different castle I made all by myself. I love building things. It's quite hard to build something. I worked hard and used lots of energy. It was a bit tricky. I built 12

Next time I would like to make a trampoline down the bottom."

P.T.O

would respond: 'Not much.' Now he goes into a lot of detail."

Keith's family

Some families saw a notable change in their child's interest in discussing their learning snapshots over time. One parent shared the following change:

> *"It went from: 'I don't have time' to 'Oh Mum, I've got a learning snapshot. Can we go and do it?' Now that's the first thing we do when we get home, is to sit down and do her learning snapshot."*

Aroha's family

Several families noticed the confidence their child had gained since using this approach. Families also noted their child's increased involvement in activities and their ability to

problem solve when issues arose.

"I think the flow on effect of this for John is that his achievements have been recognised, then positively reinforced and I think this has enabled him to gain the confidence to try new ideas, take risks and just generally engage in his environment and the learning opportunities that have been offered to him."

John's family

"Marama is more confident in problem solving and working out her own situations."

Marama's family

Families usually wrote down the exact words of their child on their learning snapshot and this increased the visibility and prominence of the child's voice in their portfolio.

(5) Learning snapshots encouraged collaboration and partnerships

Initial data was gathered from the portfolios of all four-year-old children who were attending kindergarten prior to introducing learning snapshots. Analysis of these 24 portfolios found that 75% contained no written family comment. Only one comment in 181 stories included an idea from a parent about a possible next learning step and only 4% of learning stories included any links to learning at home. These figures were concerning given our team's strong commitment to building relationships and working collaboratively with families.

By the end of the research period, family contributions in the focus group children's portfolios had increased significantly to an average of 12 per family. Links to learning at home were evident in all of the focus group children's portfolios. For half of the six focus group parents, the learning snapshot was their first contribution to their child's portfolio. All families found that learning snapshots had increased their awareness of their child's interests and learning at kindergarten. Parents noticed the way this had strengthened the continuity of learning between kindergarten and home.

"The benefit is that we are offered full involvement and feel we are able to contribute a lot more to Marama's learning and have our voices heard."

Marama's family

Families commented on the way learning snapshots led to all parties (parent, child and teacher) sharing information on a deeper and more meaningful level. The focus group families felt more involved and were more likely to suggest ideas about ways to build on their child's interests at kindergarten.

Families found this approach strengthened partnerships with the teacher and parent working together to support the child.

"It's amazing that one piece of paper can facilitate a whole 3-way partnership and I honestly believe it can and does!

… Learning snapshots had a huge impact on how we view John's learning and our part in it!"

John's family

Families also commented on the way learning snapshots prompted them to play a more active role in extending on their child's interests at home.

"Learning snapshots have been wonderful in helping Aroha and I build on her interests and in helping me feel more involved in her learning."

Aroha's family

Learning snapshots offered opportunities for all families to participate more fully, even those with limited opportunities to interact with teachers.

(6) Learning snapshots made teachers more aware of children's learning

Teachers commented on the increased detail that many learning snapshots captured. A team member observed:

"The way that learners share and explain their experiences with a family member are so much richer than we could ever gather ourselves as teachers."

Sue

Other team comments highlighted the way learning snapshots clarified children's perspectives. Often new information was shared about children's interests, working theories, and learning goals. Insight about learning that was taking place at home, family aspirations, and cultural values were evident. Learning snapshots enabled the teaching team to incorporate child and family ideas about future learning pathways when planning next steps in children's learning.

Discussion

Though learning stories were originally envisioned to make assessment accessible to children and families and to invite their participation in the assessment process, research has consistently found low levels of child and family engagement in assessment in early childhood settings (for example, ERO 2008; Stuart, Aitken, Gould & Meade 2008; Whyte 2010).

In this research, learning snapshots provoked rich conversations about learning between families and children. These conversations led to families being more aware of their child's learning at kindergarten. Learning snapshots prompted families to build on their child's interests at home, feel more involved and more likely to share ideas about building on their child's interests with teachers.

Over time, the focus group families found it less important for teachers to document the learning noticed in each learning snapshot in a learning story because parents felt they had already received detailed information about the learning interest when they discussed the learning snapshot with their child. These findings suggest learning snapshots empowered families and made them less reliant on teachers'

interpretations of learning. This aligns with Margaret Carr's (2014) view that photos enable the shared agency and empowerment of parents and children.

Families found that immediacy was a critical factor when asking children to discuss their learning. The families in this study noted there was a 24-hour window of opportunity after learning episodes where the richest conversations about this learning were most likely to occur. This finding aligns with existing research indicating that 'immediate' or 'real time' sharing increases parental engagement (Page, 2012; Hooker, 2015; Blaiklock, 2010). Delays can contribute to learning stories being viewed as a summative reporting of children's learning, thus reducing the contribution of families and limiting their formative potential (Lim, 2012).

Conclusion

This small-scale study found that learning snapshots played a pivotal role in strengthening dialogue about learning between children, parents and teachers. The information shared in conversations sparked by learning snapshots strengthened understandings about child perspectives and enabled families and teachers to work more collaboratively to support children's learning. Learning snapshots increased the engagement of children and families in assessment and this involvement enriched the interpretation of children's learning. This study suggests that learning snapshots are a useful tool for teachers to add to their assessment repertoire.

Acknowledgements

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'What's the next question'?

A self-study in extending children's thinking

Anna Jo Perry

Teaching is an active process. It involves the teacher and students in interactions with contexts, people, knowledge, and experiences as they develop new understandings about the world in which they live. In early childhood, children are just beginning to develop ideas about the contexts and people with whom they come into contact. These 'working theories' about the way their world works change with new experiences and interactions. Therefore, input from the adults around them, parents, teachers, and members of their communities plays an important role. This paper uses two examples from practice in which the focus was on ways of extending children's thinking without derailing or hijacking it from the original topic and/or intent. By doing this, the teacher was hoping to uncover and extend the childrens' working theories.

The Context

The research from which this paper developed came from a growing initiative in some tertiary institutes for academic staff to maintain 'professional currency'. I[1] had been away from teaching in early childhood centres for some years and the chance to return to working with children was an exciting opportunity. The project involved working at a Centre for one morning a week for a year and documenting these visits using a reflective journal and support from the input of a critical friend.

Methodology

As I was both the researcher and the subject of the research a self-study approach was deemed appropriate. Self-study methodology facilitates inquiry into the teacher's own practice with the specific intent of improving it. Bullough and Pinnegar (2001) contend that self-study questions: ' the self-as-teacher educator, in context, over time, with others whose interests represent a shared commitment to the development and nurturance of the young and the impact of that interaction on self and other' (p. 15).

Thus, self-study sees the practitioner as the one best placed to investigate, understand and improve their own

professional practice in particular contexts.

Methods

In keeping with this, at the beginning of this project, I took an inductive (bottom-up) approach involving writing a reflective research journal describing and interpreting the events which I noticed occurring during each visit to the Centre. This method enabled me to capture as much as I could about my practice and not be limited by asking specific research questions from the very beginning. From the journal entries, I wanted to see what was my focus in practice and what questions would grow from my observations. Richardson (1998) describes this procedure as: 'Writing as a method of enquiry… [which] provides a research practice through which we can investigate how we construct the world, ourselves and others…(p. 500).

From constant reading and re-reading of my journal notes, and the adding of connections, similarities and differences as they became evident, a set of themes emerged to form the basis and criteria for a thematic data analysis. One of these themes, namely how I used questions to extend thinking, is the focus of this paper.

Limitations of the Methodology

The self-study process employs a single perspective (i.e. the teacher-researcher) to interpret the journal recordings. To mitigate this narrow view, Loughran and Northfield (1998) suggest that:

..it is working with an important 'other' that matters. Otherwise self-study may simply be seen as rationalising or justifying one's actions or frames of reference…if self-study is to lead to genuine reframing (Schön 1983) of a situation so that learning and understanding through reflection might be enhanced, then the 'self' in self-study cannot be solely individual (p. 7)

For this research therefore, regular formal and informal meetings with a 'critical friend' to consider my ongoing interpretation of events were important and thus the inclusion of disucssion with a 'critical friend' into the methods for this research is justifiable. Such a person would

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[1] This research paper was a study of my own practice and thus the personal 'I' will be used as appropriate throughout this paper.

A working theory? "I think I can touch it."

look at extracts from my journal and discuss my subsequent interpretations. In this way, the 'self' in this study is formed from more than one viewpoint.

Ethical Considerations

My intention in this project was to focus on my own practice and, therefore, ethical considerations had to be inherent from the beginning in the intent and design of the research. However, as Tolich (2010) suggests "the self might be the focus of the research, but the self is porous, leaking into the other without due ethical consideration" (p. 1608). In many ways, this makes the ethical intentions that underpin self-study research even more important because the commitment to a reflected 'other' is at once a very personal one as well as reflecting and employing the principles that underpin institutionally-based ethics. In awareness of this potential issue, where this research potentially reflects others, letters have been used to differentiate the different people.

Definition and literature review

This research focused on the types of questioning that might uncover and extend children's working theories and it may be useful at this point, to have a definition for the term. Theories are ideas about what happens around us and why it does. They are usually ideas that are in a process

of refinement through testing and subsequent change (Timmermans & Tavory, 2012, Swedburg, 2011). Thus the term 'working theories' represents the development of new knowledge (Ministry of Education, 2007) as it is a term used to describe ideas under construction and testing.

Importantly for this research, such ideas can be difficult to see as can the knowledge that supports them (Hedges, 2011). Te Whariki, early childhood curriculum. He whāriki mātauranga mō ngā mokopuna o Aotearoa, the New Zealand early childhood curriculum (Ministry of Education, 1996) refers to working theories as "knowledge about the world, skills and strategies, attitudes and expectations" which the children form by "observing, listening, doing, participating, discussing and representing within the topics and activities provided in the programmes" (p. 44). Claxton (1990) suggests that theories built from experience are context-specific and made up of a collection of "mini-theories" (p. 8) that form a platform from which to interpret new happenings. He goes on to suggest that the process of refining these "mini-theories" equates to learning. In this research therefore, working theories are ways in which children develop explanations of their environment and/or the activities in which they are engaged. The term 'working' means that these ideas are still in the process of being developed, tested and refined. The intention of this project was to use listening and appropriate questions, to better

see and understand the working theories the children were using at the moments of our interactions.

Developing the question

From the first day, my journal notes contained a growing number of extracts about the working theories that the children used to make sense of things. I became increasingly aware that I was thinking more and more about my own interactions with the children as they engaged in activities and I was listening very carefully to their conversations with each other and their teachers. This growing focus led to my first specific research question namely 'how can I extend children's thinking about events or environments without leading or changing the initial intent and can this help me uncover and understand their current working theories?' (Peters & Davis, 2011).

Peters and Davis (2011) suggest that the teacher's voice should provoke further ideas not change the direction of thinking. This meant that what I said in response to their ideas was crucial as was how I balanced my intervention so that I also did not take on leading the thinking process. Te Whariki (Ministry of Education, 1996) describes working theories as often retaining a "magical and creative quality" (p. 44). This drew me to consider the effect of my responses on the creation of spaces in which the children could think creatively and perhaps evolve their current working theories.

Based on my previous experience, I wondered about the effect of asking "what do you think"-style questions and whether the broad strategy approach would always prompt further thinking about what was happening. I had used this strategy many times when talking to children about their art work. Yet an activity early on in the project showed me that this strategy was not always helpful.

Event One

The children were introduced to playdough made with baking soda that disolved when sprayed with vinegar. The children molded the playdough as they were used to doing and then were given plastic bottles filled with vinegar to spray their creations. As the playdough disolved, I asked them "what do you think is happening". The question was met with silence. After a while one of the older children remarked that it "smelt like salt and vinegar chips". My response was "That is interesting, I wonder why, what do you think?". There were no further comments from the children. I am confused about the lack of response to my questions. This was the first time they had done the activity I wonder if there might be more response next time when there is a level of familiarity. They also didn't see the playdough being made so there was no conversation about the different feel of the ingredients to normal.

Reflection

This was an episode designed to find out what the children would think and say about what was happening. I had thought that it would challenge thinking and the children would share their ideas about what they saw. I

asked open-ended questions as I had planned but with little result and was consciously wary of adding more in case I began to lead the thinking rather than encouraging and extending it. Peters and Davis (2011) comment that adults should be aware of the power in their role and the ease with which, unthinkingly, they can change the direction of thinking. Yet, in being aware of this, I was really unsure of what to ask or say next when the children had nothing to say and there remained in my thinking a tension between the level of interference and the possibilities inherent in giving children the words to describe what was happening. This tension prevented me from adding a structure in which the children could successfully think of solutions. In this case, a more appropriate next comment may have been "Oh look the playdough is turning to liquid". This would have role-modelled the response for the children to then think about and create what Hargraves (2014) calls a "meaningful context from which to create meaningful theory" (p. 33). In other words, by intervening further in this activity my questions could have better mediated learning (Jordan, 2004).

In the second event I asked the right question which brought forth a theory from one of the children:

Event Two

We were at the swings today and one of the children's jandals kept falling off while her friend managed to keep hers on. C was getting quite cross as D was keeping the jandals in place but she was really unable to do this. I asked "why do you think her shoes stay on and yours don't". C was silent for a moment and then she suggested that her friend's shoes were smaller and tighter. I then asked "How could we make yours stay on if they are too big? Maybe we could use something to keep them in place?" D suggestd glue but C was not very keen about this idea. However, when her friend suggested tape because "it's sticky too but not yucky" she smiled. They fetched the tape dispenser and together stuck a long piece across the front of each jandal. I asked them "Why do you think this will work?". They were both clear that it would because the jandals were now "stuck on". We returned to the swings and were very pleased when the jandals did not move.

Reflection

In hindsight, I asked the right question here. Instead of being very general and asking a 'tell me about it'–style question, I asked something more specific i.e. "why do you think this is happening". Hargraves (2014) suggests that such moments need structure in order to enable "coherent progression in knowledge construction" (p. 35). In other words, by focusing the children's thinking on the topic of the shoes and how they might be kept in place, I helped them to draw more easily upon previous knowledge in order to put forward a range of ideas to solve the issue in hand.

This also formed a tension with my own previous understanding. The idea of giving the child enough space to tell their own story was ingrained in my practice. Yet, this idea of structuring thinking was clearly more successful. Of

course, I could have suggested taking the jandals off, but that would have changed the line of thinking and stopped the possibilities for further development of ideas.

Discussion

Humans are in a continuous state of making sense of what is happening around them. They draw on previous knowledge to aid them in this process and develop ideas to test in a similar environment when it next occurs. In adult theorising events, this is not so necessary as they have a wide range of understanding upon which to draw in problem solving such matters. Yet, children do not have extensive reservoirs of previous knowledge to use in making sense of the world around them. Therefore, questions that prompt further thinking can ellicit new theories (ideas) about why something has happened or why people respond in the way they do. This research showed that on some occasions with the children, when I asked what they thought about what they were doing, there was no answer and at others a full blown idea emerged. It seemed that the questions that I asked might be a clinching catalyst that worked to either free-up thinking or freeze it completely.

The two examples given above show that role modelling the words needed to express ideas can create and enrich learning events for the children. In these two events the children were engaged in social interaction about the issues and I attempted to add a structure in which they could successfully think of solutions. In the first example, I used a more traditional strategy that focused on what the children could draw on about the event. In asking similar questions about art work, children had subsequently gifted me vivid stories about their paintings. In the second instance, I asked much more specific questions and role-modelled the language they might use. In asking such explicit questions, I was aware that I might stray across the line into leading the thinking. However, my journal entries suggest that the questions served to provide a structure in which thinking could both emerge and evolve.

Therefore, the two examples given here, even though they represent a small sample, suggest that sometimes adding more specific words and ideas can enable the development and enrichment of emerging ideas. They can also bring forth conversations that show the teacher what the child is thinking and why they have these theories in use at a specific time. The task for the teacher is to recognise whether broad or more specific questions will be successful and be ready to move from one to the other with ease. This skill is important because these small changes in working theories are important for refinement and redevelopment of children's thinking. This is what Claxton describes as making "explanatory connections between experiences and understandings (p. 273)".

Early childhood theory focuses strongly on the co-construction of learning. This means learning emerges from the interactions between adults and children, children and children and children and the environment. Adults are able to articulate why they think as they do but what children actually bring to such interactions is less defined. Determining the next appropriate question therefore, is crucial to extending thinking and enabling refinement of their own working theories which impact so strongly on their understanding of their world.

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Love the place where you belong

Ecological identity in early childhood

Glynne Mackey

Pre-service early childhood students, beginning a course in education for sustainability, are asked in a workshop setting to reflect on memories of being in significant places in their earlier years. Common themes keep returning as the group shares. There is a strong theme of relationships: relationships with extended family, with friends and with the environment. There appears to be a feeling of trust in the stories between the adults and children, a feeling of trust that allows children to explore the place with less adult supervision. There is also trust and security in knowing the environment and how it might support the individual when making judgements involving risk and adventure.

Student teachers also value such times in their special place because life became less hurried, less dependent on technology, and more reliant on creativity, imagination, play and family group fun. Those who return regularly to their place noticed changes, gathered history and knowledge of the place and found they had developed an attachment that was often expressed as a strong emotion. Some showed concern for development that took away the character of their place of significance.

The notion of 'place' is an effective starting point for a study of sustainability because it is part of the lived experience of us all. A personal reflection on place is likely to raise awareness of the importance of place (Sobel, 1990), therefore enabling teachers of young children to be more understanding of the relationships that are so important in the early childhood community. Reflective teacher educators look for feedback from students in addition to information from the scholarly readings, research and reflections on effective practice (Spiller & Bruce Ferguson, 2011).

As a teacher educator in early childhood programmes, I too, have sought feedback and reflected on student comments but also looked for ideas and effective teaching strategies to challenge thinking that engages the student teacher with course content and to rethink personal lifestyle choices. The book *Piglet the Great of Karaka Bay* (Watkins, 2003) inspired me to introduce sustainability to early childhood preservice teachers by first giving students an insight into their personal memories of a place where they felt they belonged, in the hope that they would begin to understand something of sustainability through their own experiences.

Using a story of a pig who once lived in Karaka Bay, Auckland, *Piglet the Great of Karaka Bay* is written by an Auckland architect, Tony Watkins. Through the voice of Piglet the Great, Watkins writes:

> *"My little friends love being on the pig's back," says Piglet. "The joy of talking to little children or gathering around a fire with friends is seldom taken into account in life. Yet this is not time wasted. These are memories which remain"* (2003, p. 18).

Watkins' intention was to guide his architecture students in loving the place where they belong, so that their decisions around town planning and city development embrace sustainable attitudes and values. Busy places like cities can be sustainable when people value "the old fashioned virtues of generosity, tolerance, trust, hospitality, and open-handedness" (Watkins, 2003, p. 37).

Memories of places that have evoked a strong sense of belonging and a love for the place are likely to influence the professional lives and decisions of architects, and maybe of teachers, when they rethink the interconnectedness of the human and more-than-human world.

This article considers the importance of place and ecological identity in early childhood teachers and children. I propose that place gives relevance to learning, linking to local events, communities, histories and regions.

Ecological identity and place

As peoples have moved around the world and as conflicts and colonisation (in its various forms) have displaced people from their land and their resources, we become more aware of how a sense of belonging to a place is important (Taylor & Giugni, 2012). Raising awareness of place, along with other learning about the environment, begins in early childhood (Duhn, 2012). It is from this foundation that people begin to feel physically, emotionally and spiritually connected to a place; to develop an ethic of care for this place and to understand more of ourselves and our identity within the ecological realm.

Nabhan and Trimble (1994) in their book, *The geography of childhood*, strongly advocate for learning that is immersed

in place as nature nurtures a strong sense of connection with the land, the living creatures and the wisdom and ways of indigenous peoples. Indigenous people have an oral tradition that tells of a genealogy within the flora and fauna of their environment which gives them a spiritual basis for living (Ritchie, 2012) and acts as a guide for all people in their interactions with the place where they belong. Ritchie explains how the relationships that people have with the natural world positions humans as interdependent with the natural world where caring, and nurturing the environment leads to strong spiritual and emotional bonds with place.

According to Taylor and Giugni (2012), there is more to understand about the interconnectedness of the human with the non-human world. Their discussion on 'common worlds' looks at place as being dynamic and diverse in character, and fundamentally interconnected through our relationships to wider communities, both human and non-human. Taylor and Giugni (2012) take a similar position to Ritchie (2012) in that place, decolonisation and indigenous values and beliefs are seen as vital in developing relationships and responsibilities within common worlds. Taylor and Giugni's common worlds' framework project proposes that "…we are working towards a pedagogy that encourages children to actively seek out and include others, to establish 'questioning relationships' with these others and to practice responsibility for and with these others in their common worlds" (p.115). Davis (2014) supports this common world view as it helps teachers to gain an extended and systemic view of rights to include the rights of indigenous peoples as well as the biocentric and ecocentric rights of the environment.

Teachers who value place, and understand our connectedness to place, will embed these values and attitudes in their chosen pedagogies. The early childhood years shape attitudes and values, making this an important time for children to explore their environment around the place where the family lives. Building on John Dewey's understanding of children as active learners who are more interested in experiencing what was happening (instead of just learning about it from others), Smith (2002) suggests that children who experience being, living and playing in their place are connected to the social reality of their lives. These children develop attitudes and values that demonstrate respect towards the place where they belong.

Through experience of place, children can play and learn alongside teachers, and explore with families. Pedagogies that embrace participation, belonging, exploration and communication and embedded in place, will encourage the values of care and guardianship, but also give space for children to exercise their agency by influencing others and making a difference for our sustainable future (Vaealiki & Mackey, 2008). Active learning within place-based experiences is real and meaningful and will form the foundation for lifelong values and attitudes towards place, people and the environment.

Ecological identity for teachers

Teachers have an ethical and professional responsibility to provide experiences and teach young children about kaitiakitanga[1]: being guardians of their place or local environment. Effective teaching and role modelling requires sustainability to be part of the teacher's conscious and reasoned patterns of thought and behaviour. Bonnett (2006) argues that sustainability is a 'frame of mind' meaning that individuals and groups must be able to approach local issues with some critical reasoning; therefore empowered to be part of the decision. He explains the 'metaphysical transformation' needed to be able to think and engage appropriately with the environment. Bonnett's writing has significance for teachers and teacher education programmes where teachers must be confident to collaborate with colleagues and communities on the importance of local issues and have an awareness of their place; its past, its present and its future. He affirms that "If we love (value) ourselves, we will love (value) that which we believe supports us" (p. 14).

The spiritual significance of place is also reflected in research by Sobel (1990) who interviewed adults on their memories of place from childhood and concluded that as children explore their local environment and discover new places, they learn more about interdependence with place and independence as they explore aspects of their identity. He compares the bond with nature and places as being similar to the early years' bond between child and parent. As age and experience grows we are more confident to move beyond the security and familiarity of local places to explore wider, less familiar places, interconnected but often far away. Sobel sums this up by stating "The person makes a literal place in the world during childhood, preparatory to making a figurative place in the world during adolescence and adulthood" (1990, p. 10). Place-based experiences in the 'common world' that embrace change and diversity in communities near and far, give children a sense of identity of where they have come from and where they belong.

From his adult students, Sobel (1990) noted common themes as they reflected on childhood experiences of being free to explore local spaces:

- Children valued time away from adults to discover their own special places;

- These places were secret;

- They felt they had ownership of the space;

- They felt safe;

- They were organised worlds;

- Making a special place made the children feel special people and this feeling stayed with them to adulthood.

Although the responses from preservice early childhood student teachers are anecdotal, over time I have been interested to note the similarities in student experiences, and how they also mirror what Sobel (2005) describes. Further Penetito (2009) talked about the way these experiences

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[1] A glossary of Māori terms is given at the end of this article.

nurtured the human spirit. Student reflections show much of what is spiritual, as well as nurturing a sense of connection and love of place. Reflections on past experiences can be sought out in several ways including personal narratives or photographic stories. Through reflecting on their earlier experiences of place students come to see how there is an emotional and often spiritual response (Ritchie, 2012) that plays a significant part in the ecological identity of indigenous and non-indigenous peoples.

Developing an ecological identity, may be one pathway to increasing teachers' and children's awareness of place. Our relationship with place and the natural world, both past and present, is a significant part of our identity and how we see ourselves and our relationship with others (Bonnett, 2006). Research on early childhood teacher identity, involving a small group of early childhood teachers, shows that they highly valued the relational aspect of their role as teachers (Warren, 2013). Relational aspects in early childhood communities extend beyond the people of today to include past histories of the place; those who lived and worked in the locality: their childhoods and families; their education, health and welfare; how they worked the land; their occupations, their politics, values and beliefs. These relationships are not only of the human world but with the non-human or more-than-human world. Indigenous communities have a strong sense of their identity and relationship with all elements of the 'human and more-than-human environment' (Ritchie, 2012). Narratives related to place, both past and present, must not be ignored if teachers are to fully understand the diversity of communities and places where they live and work.

Building the capacity of teachers and teacher educators

The UN Decade for Sustainable Development, 2005-2014 focused on reorienting teacher education towards sustainability. The goal has yet to be achieved to a reasonable level across all sectors of education, including early childhood (O'Gorman & Davis, 2013). As policy makers and teachers move forward with much needed urgency, UNESCO (2014) has now offered the Global Action Programme for implementation calling for an expanded focus on education and "building the capacity of educators and trainers" so as to strengthen further education for sustainability. The planet crisis that faces us all can be lessened through education (Parliamentary Commissioner for the Environment, 2004) and realising the potential impact of teachers on their learning communities.

The following section looks closely at teaching strategies that explore how the intentions of the UNESCO Global Action Programme (UNESCO, 2014) might be reflected in programmes designed to build the capacity of teachers, and teacher educators. These strategies focus on the development of ecological identity and exploring a love of place with young children.

Strategies to develop an ecological identity in student teachers

O'Gorman and Davis (2013) are both researchers involved with early childhood teacher education programmes in Australia. Their recent research looks at a teaching approach that ascertains how their students would best engage with the issues of sustainability. They introduced an eco-footprint calculator to the students so that they could see what their environmental footprint was. Students were shocked at their results that indicated that several planets would be needed to sustain their current lifestyle choices. Behaviour change often requires us to experience a certain level of discomfort with our present situation before we are ready to reflect and reconsider more sustainable choices.

It is likely to be a challenging area. Hägglund and Johansson (2014) write that it is important to bring a critical lens to our study of sustainability as it is often an area of misunderstandings, conflicting and opposing arguments requiring respect and open democratic process. They acknowledge these challenges as being part of conversations not only with student teachers and teachers but also with children. They refer to the work of Janusz Korzak who emphasised the importance of not sheltering children from the negative aspects of life:

> Such conflicts allow for new perspectives to merge and provoke possibilities for change. However, disagreements must be expressed and dealt with in a friendly and respectful way. This means that the ways teachers and children approach value conflicts in everyday practice are important in emergent learning for sustainability, democracy and justice (Hägglund & Johansson, 2014. p. 44).

Two Māori concepts are particularly important in the reflection on place: whanaungatanga[1] and kaitiakitanga. Teachers in Aotearoa New Zealand are encouraged to use a lens of whanaungatanga and kaitiakitanga to link sustainability to place. Place-based research has demonstrated how early childhood teachers used these indigenous understandings to encourage caring and love for place. There is a strong sense of relationality in the way the children and teachers use indigenous concepts to respond to the everyday issues while playing and learning together (Ritchie, 2014).

Penetito (2009), a prominent Māori academic and educator, emphasises the spiritual significance of place. He explains how place is fundamental for all humans as it is part of our identity and culture, as well as bringing together the mind and spirit. The way in which we act out our responsibilities of whanaungatanga and kaitiakitanga will nurture the human spirit: mauri and wairua along with all that is connected within the place where we belong. He makes the point that place based education is not only beneficial for indigenous students but for all students. This notion of place has been woven into Te Whāriki (Ministry of Education, 1996), the early childhood curriculum, where teachers strengthen Mana Whenua (Belonging) through connecting the child with the wider world, to ensure the child has a place where they feel secure in their identity.

Exploring place in the early childhood setting

Teachers and student teachers who are aware of the special character of place can be more confident in understanding the communities that nurture the young children that they are responsible for. Penetito (2009) challenges teachers to consider questions relating to how much they know about the communities they work in and how local knowledge of the community makes a difference to the children's learning of place.

The following are some examples from the literature that demonstrates teacher commitment to knowledge of place and sharing with children within the everyday curriculum:

1. Geographical features of place

Teacher stories gathered from research in a local Christchurch kindergarten (Vaealiki & Mackey, 2008) referred to the geographical features that are often discussed especially on outings beyond the kindergarten. The kindergarten is situated within an extinct volcano of Lyttelton Harbour. The children had on occasions walked to a high point in the Port Hills to see how the land had been formed. Local elders have been invited to be involved in regular events such as these. Their involvement is critical in the way in which teachers and children learn more sustainable ways of knowing and living (Ritchie, 2014). On one occasion the children were accompanied by teachers, local Māori elders and family members. They all walked in the surrounding hills to see their place from a high and very different vantage point. From this height children could see the extensive spread of the harbour, the bays, and steep hills and hear stories from the past experiences of others.

Narrative accounts of events, real people and their stories of the past are important for any community so that teachers and others can form relationships and connections based on insights and knowledge passed on from elders. The volcanic origins of Lyttelton Harbour and recent Canterbury earthquakes, some of which are centred in this location, might evoke some conversations about Ruamoko and the formation of the land with the children.

2. Histories and stories of place

Place-based histories and stories help to strengthen understandings of the land, human and non-human environment and the aspirations the communities have for their children. Newcomer families and children from other cultures will have their own stories that can be shared and respected as being part of their identity. Sharing with other cultures gives children the opportunity to be open to learning about different places and hear differing perspectives on ways of being that work to strengthen love of place and ecological identity.

3. Children belonging to place

Children who feel a sense of belonging to place are likely to show caring and concern for their environment and participate as citizens in action within the community (Sobel, 2005). During the everyday experiences in the early

Place-based experiences for infants, toddlers and children

1. Place-based experiences for infants, toddlers and children

2. Children tell their stories of places with families (camping, weekend walks, time with family, exploring, imagining, wondering).

3. Local people and family tell their stories: indigenous stories of past and present; grandparent stories.

4. Celebrating festivals and events in the community and local area (e.g. Matarkiki.)

5. Children photograph or video things that are important in their place leading to photo displays, group or individual stories, using iPads, PowerPoint, movies and presentations.

6. Visit the local park – rangers, conservation workers to show children what is being done. Talk about caring for the place. Record and recall previous visits. Return regularly to explore, and observe seasonal changes.

7. Be quiet and thoughtful outdoors – listen, look, smell, touch. Walk, lie down, close eyes, imagine, and wonder.

8. Cooking and eating in the outdoors and eating together. Sharing food, giving food to others.

9. Collect natural materials (off the ground) for art work or science.

10. Children make maps of the area. Identify family homes, community places, parks, areas of interest. Local phenomena such as changing seasons, new building projects, storm damage, flora and fauna.

childhood setting, these skills of participation, contribution and collaboration are to be encouraged with the children, along with an explanation as to why it is important to work together in this way (Mackey, 2012). Through such experiences children see themselves as having a connection to place where they begin to see "not only who we are and where we are, but how we fit in, what the place means to us and what we mean to the place" (Penetito, 2009, p. 24). Caring for their place and seeing how their efforts have made a difference encourage the dispositions of kaitiakitanga and taking responsibility, which therefore can lead to a feeling of affection and empathy for the world around them.

A selection of practical suggestions (see sidebar) may help student teachers, teachers and parents to support young children in their exploration of their place and their developing relationships with the human and non-human world around them. The context of learning is always important for children; therefore these ideas can be adapted and modified to work within the culture and context of the early childhood community within which the child lives life. The risks of exploring outdoors also need to be managed appropriately.

Conclusion

Loving the place where we belong is the key to wanting to find more sustainable ways to live within the Earth's delicate and overloaded ecosystem. Teachers and graduands/student teachers who make time to reflect on their childhood experiences will build their practice based on their own love of a special place, and encourage children in their quest to love the place where they belong. This ensures that the curriculum values place and that children and families are able to participate in shaping their responses to their place.

Teacher education programmes and ongoing professional development must integrate an awareness of place into the everyday curriculum and honour the intentions of *Te Whāriki* (1996) in strengthening confidence and competence in children within their special place. Being confident in knowledge of place, loving and valuing place, and caring for place are all crucial to determining our identity as citizens, and as advocates for addressing the issues of place that shape identity.

Glossary

Kaitiakitanga	Stewardship/ guardianship
Mauri	Life force
Ruamoko	Māori god of earthquakes
Wairua	Spiritual dimensions
Whanaungatanga	The nature of families

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In whose interests?

Looking back – thinking forward

Clare Wells

Who has an interest in early childhood education?

Children and their parents and caregivers, and families and whānau all have an interest in quality, access, affordability, and the relevance and cultural competence of early childhood education (ECE) services. Practitioners – teachers and educators, academics and researchers – have an interest in quality and excellence, engagement, and outcomes.

Service providers and sector organisations, and politicians and government officials have an interest in market share and provision of services, participation, value for money, quality, benefits and outcomes, and reputation. The wider community and the public have an interest in the benefits for children and whānau today and for society tomorrow.

As policy maker, regulator and funder, so too does the government have an interest.

Responding to and managing these multiple and varied interests over time is complex. The interests are not the same; they have different drivers and look for different outcomes. Some interests converge, some override others. They compete with each other to be the dominant discourse. This is the dynamic that we have been experiencing in ECE for decades, reflected in policy shifts with enduring effect.

This paper takes an historic view of how the complexity of interests has been evident, especially in policy initiatives.

ECE becomes a government priority

In 1988, Dr Anne Meade presented the report of the Early Childhood Care and Education Working Group. The working group was one of three in the education sector tasked to examine the state of the education in New Zealand. The government saw ECE as having 'priority among its social policies' (Early Childhood Care and Education Working Group, 1988, p. iii).

The Meade Report (as the working group's became known) set out the benefits and characteristics of early childhood and the roles and responsibilities of government, community and family. It highlighted the key elements at the 'heart' of early childhood provision: features which are "in the interests of the child … in the interests of caregivers [and] in the interests of cultural survival and transmission to succeeding generations" (Early Childhood Care and Education Working Group, 1988, p.6).

Building on the recommendations of the Meade Report, the government produced its policy document for ECE: *Before Five*. It was released later that same year stating "At all levels of education, the early childhood sector will have equal status with other education sectors" (Department of Education, 1988, p. 2). Aligning funding and employment conditions across the sector, improving ratios and group size, establishing teacher education qualification requirements, and setting up national guidelines and charters were identified as areas of work to be undertaken (Department of Education, 1988).

However, there was considerable push-back from government advisors, particularly the Treasury. It contended: "Tightening regulations on the qualifications of staff is likely to reduce the role of volunteers and have substantial influence on cost and availability…. [m]any of the existing regulations are likely to raise the pay of preschool staff" (Treasury, 1990, p. 132).

Despite that, the government ploughed ahead with changes to support the Meade Report's recommendations in the interests of children, whānau and family. Significantly, funding to ECE services almost doubled.

Tussle between quality and cost

In late 1990 the newly elected government presented its *Economic and Social Initiative* charting the course policy direction would take for most of the next decade. The initiative introduced four key platforms.

- **Fairness:** those who can make greater provision for their own needs should be encouraged to do so.

- **Self-reliance:** increase the ability and incentives to individuals to take care of themselves.

- **Efficiency:** social services represent the highest possible value for each tax dollar.

- **Greater personal choice:** alternative providers of health, education, housing and welfare services will provide people with a wider choice to meet their needs (New Zealand Government, 1990, pp. 11-12).

The government initiated 17 reviews of education. These were all undertaken by officials. ECE funding, property regulations and staffing – the areas improved so recently – came under scrutiny.

The following year, 1991, massive cuts to government spending were made. In ECE, funding for under-twos was reduced by 38% and there emerged an increased emphasis on

targeted funding. The plan for all 'persons responsible' to have a three year equivalent teacher training (120 points) by 1995 was stymied when the target was paired back to a two year equivalent, although not that such a qualification existed at that time (Wells, 2000).

Against all odds however, work began on developing a national ECE curriculum – developed by the sector and consulted on widely. *Te Whāriki* built on the experience of curriculum within different services, research findings, international literature, and the shared knowledge and agreed understandings that had emerged in New Zealand over the previous two decades (Ministry of Education, 1996).

Meanwhile, in reports published in 1993 and 1995, the Education Review Office found ECE could be doing much better on quality. The sector took the initiative to develop proposals that would take it forward on a sound basis into the 21st century. NZEI Te Riu Roa brought together representatives from community-based services to examine and report on the current state of ECE and to develop proposals for the future (NZEI Te Riu Roa, 1996).

The group, chaired by Dr Geraldine McDonald, released *Future Directions* – an interim report on the structures and funding needed to support high quality ECE for feedback in June 1996, and its final report in September that year set out three goals:

• That ECE services be **universally funded** a basis equitable to schools by 2000.

• That policy development at national, regional and local levels be **a partnership** between the government, providers, practitioners and parents and caregivers.

• That the government develop **a strategic plan** for the early childhood sector (NZEI Te Riu Roa, 1996).

It made 24 other recommendations covering funding and accountability, special education, and staff qualifications (NZEI Te Riu Roa, 1996).

Spearheaded by the sector, an unprecedented campaign followed to promote the report's recommendations. It included public parliamentary select committee hearings in six regions across the country to hear from petitioners calling on the government to adopt the recommendations, to allocate an additional $40 million to the sector, to plan for the delivery of equity funding, and to develop a long term strategy for the ECE sector (Wells, 1998).

1996 was an election year. Bar one, all political parties committed to implementing the recommendations from *Future Directions*. Although never attributed to the report or as a result of the sector and public pressure during the campaign, a number of policy changes were subsequently made. These included increases to funding, and the development of equity criteria, and support to upgrade qualifications (Wells, 1998).

The level of engagement from the sector in designing policies and influencing the political agenda was in stark contrast to the officials 'behind closed doors' reviews of the early 1990s.

Focus on investment

In 1999, a new government was elected led by Prime Minister Helen Clark. The government set about its ambitious agenda, setting up a representative advisory group to develop a strategic plan for ECE. The strategic plan picked up and built on a number of the policy intentions that had been set out 10 years earlier in *Before Five*. It established *Ngā Huarahi Arataki*: a shared vision for ECE – a common vision of what success looks like for children in ECE – and a pathway to achieve the vision by providing a comprehensive policy framework, establishing that "[l]ong-lasting improvement is most readily achieved through a deliberate journey" (Ministry of Education, 2002, p. 4). The journey was to be guided by three goals:

• increasing participation,

• improving quality, and

• promoting collaborative relationships.

The government acknowledged that in order to achieve these goals, there would need to be major changes, noting some of the biggest shifts in direction being:

• a revised funding and regulatory system,

• introduction of professional registration for all teachers in teacher-led services to align with the requirements for teachers in kindergartens and schools, and

• greater involvement of government in ECE particularly where participation is low (MOE, 2002).

The government made clear its intention to use the levers that it had available – funding, regulation, support – to realise the goals. The goals and strategies set out in *Ngā Huarahi Arataki* underpinned all policy and every initiative for foreseeable future.

In the mid-2000s, the government introduced a funding structure to support the sector to reach and sustain a key aspect of quality – a qualified teaching workforce. Research showed that alongside ratios and group size, teacher qualifications are central to quality ECE provision. Funding was structured to incentivise services to reach and maintain the employment of a 100% qualified teaching team, supporting the government's aim that by 2012 all ratioed staff working in ECE centres would be qualified and registered teachers.

Two years later, 20 hours 'free' ECE was introduced for three and four year olds in teacher-led services. The intention was to reduce the cost to parents and caregivers and to encourage increased participation in ECE. This was within in the context of wider changes to address income disparities and to provide better support for working families (May, 2009).

In 2008, a new government was elected led by Prime Minister John Key. Again, an ambitious agenda was signalled. Advice from Treasury at the time set the tone: "In the education system, the focus should be on improving the quality of expenditure as existing baselines are adequate to achieve improved educational outcomes (i.e. there is no need to

increase real expenditure significantly)" (Treasury, 2008, p. 19).

In 2009, the government announced the staffing target in 2012 would be 80%, not 100% qualified teachers. A few months later as part of Budget 2010, the two top funding bands – supporting 80% and 100% qualified teachers – were removed. It is important to note that the minimum requirement remained for teaching teams to consist of at least 50% qualified teachers. For centres that had reached 80% qualified teaching teams , the effect of the 2010 changes was to disincentivise centre management from hiring more qualified teachers.

Brought in over a five year timeframe, the Education (Early Childhood Services) Regulations 2008 saw the end of the previous provision for licences to be renewed every five years. The new regulations allowed centres to have up to 150 children aged over two years old enrolled at any one time, and up to 75 under two year olds. While the mechanism stayed in place, funding increases were largely targeted to equity funding; in 2016 the top funding rate for 20 hours ECE is less than it was in 2008 (Education Counts, 2016). It was also during this time that 20 hours ECE was extended to parent-led services, as well as to children remaining in ECE after their fifth birthday.

Over the decade, the sector profile changed markedly. ECE provision grew by 28% the most significant growth being in education and care services. There was also a dramatic reduction in the number of community based services: from 75% of all ECE services in 2000 to 58% in 2010. The number of community based services remained fairly static over that time, while the number of for profit services increased by approximately 1,000 (Education Counts, 2016). Teacher-led services are the norm; with 84% of children enrolled in ECE, around 138,500 attend a teacher-led service (Education Counts, 2016).

ECE prioritised – potential recognised

In 2010, a taskforce on ECE was set up to examine what value the government gained from its investment in ECE, and to recommend new and innovative ways to support ECE without increasing current expenditure (ECE Taskforce, 2011).

Its report the following year *An Agenda for Amazing Children,* produced 11 essays on policy design. In his introduction to the report, the taskforce chair Michael Mintrom stressed the group were 'concerned to show that universal access to high quality early childhood education for every young person is our best bet for placing New Zealand on an upward trajectory in terms of both social and economic outcomes' (ECE Taskforce, 2011, p. 4).

While a number of aspects of the report were well received, others were of concern for those who wanted quality improvements. The report stopped short of recommending a return to the 100% qualified teacher target. It proposed parents pay more for ECE, raising the question of affordability and access for all children to ECE in future. Many of the recommendations related to a proposed new funding

mechanism to drive outcomes (ECE Taskforce, 2011).

It was around this same time that the government introduced its *Better Public Service* goals – high level goals and targets providing the focus for government agencies activities. There was to be a focus on better health outcomes for children and increased participation in ECE so that 98% of children starting school in 2017 will have attended a quality ECE service.

There was to be a greater – and timely – focus on vulnerable children with the Vulnerable Children Act in 2014. More immediate and effective support for children in vulnerable situations and new requirements for everyone working with children came into effect in July that year.

There was also a greater emphasis on successful education outcomes for Māori and Pasifika children, specified in *Ka Hikitia: Accelerating Success 2013-2017* and the *Pasifika Education Plan 2013-2017* (Ministry of Education, 2013).

Alongside all this activity, the government set up the Advisory Group on Early Learning (AGEL) in December 2014 to examine the implementation of *Te Whāriki* and recommend ways to align curriculum planning, implementation and evaluation between ECE and schools (AGEL, 2015). The following year, Investing in Education Success (IES) and the agreement with NZEI Te Riu Roa on Communities of Learning were established with the aim of schools and ECE services working in collaboration to raise achievement in their communities.

AGEL and Communities of Learning signalled an increasing interest in the quality of ECE provision by the ministry and the minister. In its briefing to the incoming government last year, the Ministry of Education (2014) stated:

> In ECE, as in schooling, we need to support educators to take the lead in improving quality, creating stronger, professional leadership and standards. Educators and leaders understand children's needs and experiences best, and are well-placed to find and deliver solutions. We need to also work with the profession, and providers of initial teacher education and professional support, to ensure graduates more closely fit the needs of ECE services (p. 27).

The Ministry of Education (2014) identified opportunities to ensure every child has the core skills 'they need for lifelong learning,' including:

- building a **stronger evidence** base about ECE attendance, the quality of ECE provision, and supporting children's learning;

- working with ECE services, whānau and communities to **improve participation** for those children who would benefit most from ECE;

- **concentrating resources** so all services deliver high quality ECE; and

- ensuring in ECE and the early years at school, children and whānau experience more consistent teaching and

learning that **acknowledges and values their language, identity and culture**.

Conflicting and converging interests

The focus on participation, quality and collaboration has been a feature in ECE since 2000 albeit they have played out in quite different ways. Reflecting on policy development and implementation over the past few decades, reveals the strong interest in ECE provision of the sector and of the government, which at times has been complementary and at other times, at odds. The research evidence underpinning the various advisory and working groups has resulted in significantly different responses from government.

In the late 1980s and early 1990s, the difference was stark. The end of the decade saw government policy invest in children, families and whānau based on a common view of quality ECE, in contrast to the beginning of the following decade with its focus on cost savings and reduced regulation. The pendulum swung again in 2000 with the sector developing a 10-year strategic plan to improve quality, participation and collaboration, only to see again towards the end of the decade, key components of quality undermined with the removal of incentives for centres to hire qualified teachers.

It seems there is public and political acceptance that ECE is beneficial as both a private and public good, however we still have some way to go to reach a consensus of what policies and practices need to be in place. So while some interests have converged – such as the need to provide high quality ECE services and to support children and whānau to participate – what constitutes quality and what needs to be in place to realise the benefits of quality, remain unresolved. The costs of provision remain contested; focusing on participation positions ECE in pragmatic and financial contexts – can families afford to participate? At the same time - focusing on quality of provision – including the importance of a fully qualified teaching workforce – leads to increased costs. Who pays for quality? The role of the state is pivotal here in ensuring that both participation and quality provision can be met.

Thus the future policy directions of the ECE sector remain necessarily complex and inherently political. In considering 'in whose interests does ECE exist?', advocacy needs to continue to foreground the interests of children, family and whānau. This should be our threshold for decision-making whether at a policy level, service governance or management level, and as teachers and educators: the engagement of parents and caregivers in their child's learning is paramount.

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Contributors

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Geraldine Leydon: I have spent 20 years as a classroom teacher and senior manager in primary schools in England working with children aged three to five years old. I had responsibility for the Early Years Foundation, which in England includes children from birth to the end of their Reception year of which they turn five. I now work as a partnership tutor on an initial teacher-training programme at Manchester Metropolitan University.

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