

Critical Analysis: Original Paper

A Critique of the Use of Learning Stories to Assess the Learning Dispositions of Young Children

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Abstract

This paper discusses a number of concerns about the value of Learning Stories for assessing children's learning in early childhood centres. The technique requires teachers to observe children and write narrative "stories" to show the learning that is occurring in particular situations. There is a focus on assessing children's dispositions for learning rather than describing their knowledge and skill levels. Although there is some case-study documentation to support the value of Learning Stories, there is little evidence about the effectiveness of the widespread use of Learning Stories to assess and enhance children's learning. Concerns about Learning Stories include: difficulties with establishing the validity or accountability of Learning Stories; problems with making subjective interpretations based on short observations; a lack of guidance on where, when and how often to make Learning Stories; problems with defining and assessing learning dispositions; and difficulties in using Learning Stories to show changes in children's learning over time.

Key Words: Assessment; Learning Stories; dispositions; learning; curriculum

Introduction to Learning Stories

Learning Stories are a widely used technique to assess children's learning in early childhood centres in New Zealand. The technique requires teachers to observe children and write narrative 'stories' to interpret the learning that is occurring in particular situations. The Learning Stories approach was developed in research studies carried out by Margaret Carr and is outlined in a number of her publications (e.g., Carr, 1998a, 1998b, 2001, 2004). Carr acknowledges the influence of socio-cultural theory on her work and emphasises the importance of seeing children as being located in activity and social practice (see Carr, 1998a, Chapter 1). Recently, the predominance of Learning Stories as an assessment technique in New Zealand has been further reinforced through the government funded resource, *Kei Tua o Te Pae: Assessment for learning: Early childhood exemplars* (Ministry of Education, 2004).

Learning Stories link with the New Zealand early childhood curriculum, *Te Whaariki* (Ministry of Education, 1996), by emphasising particular learning 'dispositions' as outcomes. Carr (2001) described learning dispositions as "situated learning strategies plus motivation-participation repertoires from which a learner recognises, selects, edits, responds to, resists, searches for and constructs learning opportunities" (p. 21). Five dispositions form

the basis of assessment in Learning Stories. Each disposition is linked with a particular strand of the curriculum and is assessed by focusing on a particular behaviour (Carr, 1998b).

FIGURE 1. Links between Curriculum Strands, Learning Dispositions and Behaviours

Curriculum Strand	Disposition	Behaviour Looked For
Belonging	Courage and curiosity	Taking an interest
Well-being	Trust and playfulness	Being involved
Exploration	Perseverance	Persisting with difficulty – challenge and uncertainty
Communication	Confidence	Expressing a point of view or feeling
Contribution	Responsibility	Taking responsibility

(adapted from Carr, 1998b)

Carr (1998b) suggested that, “within a particular activity or interest, the behaviours often appear in sequence – hence the name Learning Story for the package of behaviours” (p. 15). Carr (1998b) also suggested that progress in children’s learning is made visible in three ways:

1. Stories become longer,
2. Stories become wider, and
3. Stories become more complex.

Learning Stories are said to be suitable for children of all ages. A Learning Story can be made during any time of the day when a child is involved in any type of experience. Some Learning Stories may describe situations where a group of children are involved in the same experience. Learning Stories may also record the teacher’s involvement in situations. After a Learning Story is written, it may be further analysed in a “short term review” which summarises what learning has occurred. Future action that builds on this learning can then be recorded (Carr, 2001).

The Learning Stories approach to assessment has been praised by a number of writers. For example, Smith (2003, p. 12), states: “Learning Stories seem to have extraordinary power to excite and energise teachers, parents and children. Parents have become much more interested in and convinced of the extraordinary learning achievements of children in their early childhood centres.” Some early childhood teachers have described the value of Learning Stories for facilitating understandings of literacy (Hatherly, 2006) and for promoting communication between teachers, children, and families (Ramsey, Sturm, Breen, Lee & Carr, 2007). Carr’s own research provides case-study evidence to support the value of Learning Stories for children and teachers (Carr, 1998a, 2001). (See also the positive reviews of Carr’s 2001 book in Alcock, 2002, and Spencer, 2003.)

There appears, however, to have been no large-scale evaluation of the use of Learning Stories in early childhood centres. While Learning Stories have the potential to capture important aspects of children’s experiences in centres, there are questions about whether

they are an effective and practical means of assessing the richness of children's learning in a diverse range of early childhood contexts.

Measurement Issues and Learning Stories

In conventional assessment of children's learning, and in quantitative research, reliability refers to the consistency of an assessment and validity refers to whether an assessment measures what it claims to measure. Reliability is considered a necessary but not sufficient condition for validity.

Learning Stories, however, are not a conventional assessment. Rather than being a quantitative measure they fit within the category of qualitative research techniques. Carr (1999, cited in Smith, 2003, p. 11) argued that the narrative-based Learning Stories approach aligns with ethnographic and interpretive research methods and can be seen as a form of action research. Hence, it is appropriate to evaluate Learning Stories with the criteria used by qualitative researchers rather than the conventional criteria of reliability and validity.

The evaluation of assessments in qualitative research is a complex and contentious area. Moss (1994) argued that reliability, as traditionally defined in psychometric research, should not be a requirement for establishing validity in qualitative research. In later writings, Moss (2004) suggested that a different type of 'reliability' can be important. She noted her agreement with Mislevy's (1994) notion of reliability to "mean credibility of evidence where credibility is defined as appropriate to the inference" (Mislevy, 1994, p. 11 cited in Moss, 2004, p. 246. See also Mislevy, 2004).

Lincoln and Guba (1985) were among the first qualitative researchers to put forward the proposition that if validity can be established, then reliability does not need to be a concern. They stated that: "Since there can be no validity without reliability, a demonstration of the former [validity] is sufficient to establish the latter [reliability]" (p. 316).

Establishing validity in qualitative research is a demanding task. While there is ongoing debate in this area, there is also agreement among many qualitative researchers that there is a need to establish the rigor of their research by using criteria such as 'trustworthiness', 'credibility', and 'confirmability' (see Lincoln & Guba, 1985). This requires the use of strategies such as "negative cases, peer debriefing, prolonged engagement and persistent observation, audit trails and member checks" (Morse, Barrett, Mayan, Olson, & Spiers, 2002, p. 5).

The use of such techniques can increase confidence in the findings of qualitative research. It is problematic, however to apply such techniques for a qualitative assessment such as Learning Stories which are carried out by educators in the context of their everyday work. It is unrealistic to expect early childhood educators to carry out assessment with the same rigor and verification procedures that are required in qualitative research but herein lies the dilemma: without such rigor there may be little confidence in the value of what is documented in Learning Stories.

Carr (2001) acknowledged that using a narrative approach to assessment raises questions about validity. She suggested that conventional criteria of validity and reliability can be replaced by judgements of 'accountability' which encompasses the 'plausibility' and 'trustability' of the measure. Carr (2001, pp. 183-184) proposed four major ways to achieve accountability in relation to Learning Stories:

1. "Keeping the data transparent" (e.g., by providing observation information, in the form of stories, that is accessible).
2. "Ensuring that a range of interpreters have their say" (e.g., by having a number of staff discuss the interpretation of a Learning Story).
3. "Refining the constructs as they appear locally" (e.g., by staff agreeing on how children exhibit particular behaviours that indicate particular dispositions).
4. "Being clear about the connection between the learner and the environment" (e.g. by seeing that learning occurs within a socio-cultural setting).

The following discussion will examine issues related to each of these ways to achieve accountability.

Keeping the Data Transparent

The data should be as 'transparent' as possible, so that other staff and families have enough information to track and understand the interpretation presented, and to find alternative readings if they want. ... What we might call 'interpretive closure' comes as late as possible in the assessment-teaching process. (Carr, 2001, p. 183)

There may, however, be problems in keeping the data transparent in Learning Stories because interpretation occurs at the time of recording. This is in contrast to conventional observations such as 'running records', where an effort is made to first record detail of children's learning experiences as objectively as possible. Educators may then apply their professional knowledge, and consult with other educators, children and parents when interpreting the running record. A potential problem with Learning Stories is that objectivity is not sought when first describing and documenting a child's learning experience. Hatherly and Sands (2002) stated that, in comparison to running records, Learning Stories are "a different genre or style of writing: one that is less clinical ... and less concerned with keeping interpretation out of recording" (p. 9). Learning Stories appear to embrace the subjectivity of the observer, but is this going too far? Is there not value in trying to record initial observations objectively? Although it may not be possible to observe with total objectivity, this does not mean that we should abandon attempts to be objective (see Smith, 1998, p. 42 for further discussion of this point).

A related problem with Learning Stories is that assessments of children can be made on the basis of very small amounts of evidence. Publications on Learning Stories do not provide guidelines on where, when, and how often to make Learning Stories for individual children. Given this lack of guidance, it is not surprising that there appears to be great variation between centres in the use of Learning Stories. It appears to be common practice in many New Zealand early childhood centres to carry out about one Learning Story per month for each child. The observations on which these Learning Stories are based typically range from 3-10 minutes. These observations are often made while the teacher is also engaged in working with children, meaning she or he is not able to give full attention to observing the child and recording information. Some Learning Stories are made after the event, with a teacher noting down what they recall about a child's experience earlier in the day.

If a Learning Story is based on 10 minutes of observation, it is important to be aware that this is a small fraction of a child's time at a centre. For a child who attends a centre for eight hours each day, the Learning Story would represent approximately 1/1000th of his or her time in the centre. Is it valid to be making judgements about a child based on such limited information, especially if the observations have been recorded after the event?

Although Hatherly and Sands (2002) consider running records to be a less effective form of assessment than Learning Stories, it can be argued that running records provide more detailed and accurate information about a child. After a running record is taken, the information can be discussed by the child, educators and parents in order to find perspectives on what learning may be occurring. Whereas the use of Learning Stories can result in judgements being made after a few minutes of observation, a more cautious approach is usually recommended when using running records. For example, Smith (1998) stated, "It is usually important to do systematic running records on several occasions (preferably at least five) before attempting to draw conclusions or make interpretations of the data, otherwise there is the danger of observing an atypical instance. It is desirable to observe for at least 20 to 40 minutes in one session so that one may examine the uninterrupted flow of behaviour" (pp. 51-52). Of course it may be unrealistic for centre teachers to devote such time to focused observation. The point is, however, that carefully made running records can be a rich source of information, and may be a more useful and transparent form of data than Learning Stories that could be based on short observations and possibly recorded after the event.

Ensuring that a Range of Interpreters have their Say

In the Learning Story process, several staff collect Learning Stories on any one child, and the stories are shared with others as well as with families. Discussing is an important part of the process, and children have their say as well. Staff debate the interpretation, and try to figure out what to do next: deciding together, or constructing a possible direction for development. (Carr, 2001, p. 183)

In a similar vein, Hatherly and Sands (2002) claimed that although Learning Stories may contain personal perspectives, "objectivity is gained through making multiple voices visible" (p. 10). Although it is correct that multiple perspectives can be valuable, there are questions about the frequency and quality of interpretive discussions that occur for particular Learning Stories, given the many demands on staff time. When such discussions do occur, it could be argued that it would be advantageous if initial observations had been recorded as objectively as possible. This would allow others to provide perspectives on what had occurred without first having to reinterpret the subjective comments of someone else. Staff hierarchies in an early childhood centre may act to restrain some staff from offering their perspectives on a Learning Story that already contains the interpretation of a more senior staff member. Ideally Learning Stories should be discussed with parents but time limitations may not allow for this. In addition, some parents may be reluctant to disagree with the interpretation that a teacher has given to a child's actions as recorded in a particular Learning Story.

Nuttall (2005) noted that the interpretive aspect of Learning Stories occurs first in the decisions that teachers make to record particular episodes and not others. She commented that, "educators do not record vignettes of centre life on a random basis; instead they choose (either consciously or unconsciously) to privilege particular aspects by documenting and displaying them for children, families, and colleagues" (p. 67). Nuttall suggested that it would be useful to provide teachers with additional guidance on which episodes should be chosen for the assessment of children's learning.

Refining the Constructs as They Appear Locally

In the describing part of the process, staff were developing a common view of what the constructs [i.e., the behaviours that indicate particular

dispositions] look like in this local context, and for any one child. ... Of course, as local validity is increased, so claims of reliability across settings become less plausible. (Carr, 2001 pp. 183-184)

Carr appears to be saying that staff will develop a common view of how children will show dispositions in a particular setting. But how will this be known? How long will this take? Will staff members who are new to the centre or working part-time have the same views? What if staff members disagree? What if staff members are incorrect in their interpretation? Although Carr has suggested that the traditional notion of validity is inappropriate for evaluating Learning Stories, she talks here of "local validity." But if validity is to be judged at the 'local' level, we could ask just how local should we go in our analysis? It could be argued that we should not look just at the early childhood centre level, but at variation across times, places and people within a centre. Hence 'local validity' would differ not just between centres but within centre contexts. Such variation could be problematic when trying to make sense of Learning Stories.

Being Clear about the Connection between the Learner and the Environment

The relationship between the person being assessed and the other people and the activities in the environment are key features of the assessment. (Carr, 2001, p. 184)

Learning stories draw on a socio-cultural perspective which emphasises that learning occurs within the social environment. Learning is seen as being socially mediated and affected by situational factors such as the presence of adults and other children, the type of guidance (or scaffolding), and the type of activity and resources available. Variations in these factors mean that each learning situation is specific to that particular context. This level of specificity is another challenge for Learning Stories. If what is recorded in a Learning Story is specific to a particular experience, there are questions about the value of using a subjective interpretation of that experience to plan for learning at a different time in a different context.

Learning Stories, Dispositions and the Curriculum

It is important that assessment of children's learning be linked to the curriculum with which children are engaged. However, the links between Learning Stories and the New Zealand early childhood curriculum, *Te Whaariki* (Ministry of Education, 1996), are complex and not always clear. Although *Te Whaariki* contains goals and learning outcomes (covering knowledge, skills, and attitudes), Learning Stories are not focused on providing information about these areas. Instead, as noted in the introduction to this article, Learning Stories focus on children's learning dispositions. A difficulty with assessing learning dispositions, however, is they are not clearly defined. Carr and Claxton (2002) themselves note that "the word 'disposition' is imprecise" (p. 10). Different writers have provided different definitions of what dispositions are. For example Katz (1988) "says that dispositions are a very different type of learning from skills and knowledge. They can be thought of as habits of mind, tendencies to respond to situations in certain ways" (p. 30 cited in Carr and Claxton, p. 10). Perkins (1995, cited in Carr & Claxton, p. 10) described dispositions as the "proclivities that lead us in one direction rather than another, within the freedom of action that we have." In earlier work, Carr (1998b) included knowledge and skills within dispositions. More recently, however, Carr and Claxton prefer to separate out capabilities from their idea of dispositions. (For further discussion of the challenges in trying to define the notion of dispositions see Bone, 2001; Campbell, 1999; Perkins, Tishman, Ritchart, Donis, & Andrade, 2000).

If it is problematic to define the overall concept of dispositions, it becomes even more problematic to define particular dispositions. According to Carr (1998b) the five dispositions that Learning Stories focus on are: Courage and Curiosity, Trust and Playfulness, Perseverance, Confidence, and Responsibility (see Figure 1). The professional development programme that was designed to assist teachers to carry out Learning Stories (Carr, 1998b) provides little information about how these dispositions are defined.

In more recent work, Carr suggested a different set of key dispositions to those put forward in her earlier publications on Learning Stories. Carr and Claxton (2002) suggested that it is valuable to focus on the dispositions of ‘resilience’, ‘playfulness’ and ‘reciprocity’. They acknowledged, however, that “there is no clear agreement about what the ‘key’ learning dispositions might be” (p. 12). Katz (2002), commenting on Carr and Claxton, noted the need to recognise that dispositions may not always be positive for learning and development (e.g. impulsivity or close mindedness).

Coffield (2002) points out that a case could be made for assessing any number of different learning dispositions. He noted that other researchers have suggested quite different categories to Carr and Claxton (2002) and asks “Would it not be preferable to have an open-ended debate on what dispositions should be selected and why, and only then consider methods of assessing them?”

In New Zealand, however, decisions about the assessment of dispositions have been made before a debate has been held on what dispositions should be selected and why. Although the dispositions that have been selected as the basis of Learning Stories are linked with the curriculum strands of *Te Whaariki* (see Figure 1), the rationale for why certain dispositions are linked with particular curriculum strands is unclear. Given the holistic and integrated nature of New Zealand’s early childhood curriculum, it would appear possible to argue that any one of the dispositions could link with any of the strands. For example, ‘Courage and curiosity’ are linked with ‘Belonging’ but could also be seen as part of ‘Exploration’. ‘Trust and playfulness’ is linked to ‘Well-being’ but could also be said to be crucial to ‘Belonging’.

Although the link between the curriculum strands and dispositions is rather tenuous, Carr (1998b) suggested that behaviours associated with the dispositions can be used to provide assessments that relate to the curriculum strands (see Figure 1). The reason for selecting certain behaviours as indicative of particular dispositions is not always clear and there are problems in interpreting what a named behaviour actually involves. Hence, teachers could be expected to vary widely in the understandings they apply when assessing each behaviour.

Carr (1998b) proposed that “within a particular activity or interest, the behaviours often appear in sequence – hence the name ‘Learning Story’ for the package of behaviours” (p. 15). The sequence is shown below.

Taking an interest → Being involved → Persisting with difficulty,
challenge and uncertainty → Expressing a point of view or feeling →
Taking responsibility

Although children’s learning experiences may sometimes follow the above pattern, at other times they will not. For example, a child may ‘express a point of view or feeling’ immediately after ‘taking an interest’ but before they have ‘persisted with difficulty’. The danger of using Carr’s sequence as a framework for Learning Stories is that teachers may feel obliged to make what is observed ‘fit’ the above pattern, and thereby miss out on crucial aspects of children’s learning.

Any assessment of children's learning should be able to show changes in individual children's learning over time. However, the guidelines on Learning Stories (Carr, 1998b) provide teachers with little information on how to show progress in children's learning. Carr suggested that Learning Stories define 'progress' in three ways.

1. Stories become longer
2. Stories become wider
3. Stories become more complex or deeper (pp. 17-18).

A clearer theoretical rationale, and empirical evidence, is needed before teachers should be expected to use longer, wider, and more complex Learning Stories to show progress in children's learning. If assessments are to be used to show changes in dispositions, there needs to be confidence in the comparability of teacher judgements over time and across different settings (see Allal, 2002). At this point, that confidence does not exist.

Another concern with using Learning Stories is that a focus on dispositions may lead to a neglect of the development of knowledge and skills. As discussed above, Carr and Claxton (2002) make a distinction between capabilities and dispositions. They noted that the attributes involved in 'disposition' "are clearly different from knowledge, skill and understanding" (p. 10). This suggests that a Learning Story approach which focuses on dispositions may not be well suited to the assessment of children's developing knowledge, skills and understandings.

Carr and Claxton (2002) wrote that: "it is all too easy for parents' teachers' and students' attention to be captured by the traditional goals of achievement and to lose sight of the more slippery but more important, development of dispositions" (p. 16). A concern with the focus on dispositions in Learning Stories, however, is that teachers could lose sight of the importance of achievement.

The 'slippery' nature of dispositions raises questions about whether they really can be assessed. Royce Sadler (2002), in commenting on Carr and Claxton (2002) concluded "that it is doubtful whether dispositions are stable enough for their assessment to be valid or worthwhile." Royce Sadler suggested that Carr and Claxton undervalue the connection between achievement and dispositions. He points out that a child's success in achieving learning outcomes will have benefits for his or her dispositions to learn:

Although it may make intuitive sense to speak of learning disposition as if it were an enduring characteristic of a learner, in practice dispositions are highly, and probably inevitably, situational. Furthermore, important or interesting ends and outcomes make up the primary mechanism by which dispositions are accorded meaning and significance for the learner. ... If educational programmes and exercises are devised to foster the development of positive learning dispositions, the conceptual models underlying these programmes cannot afford to overlook, or pay only lip service to, the issue of ends and outcomes as integral elements. (Royce Sadler, 2002, p. 46)

Conclusion

It is now more than ten years since Learning Stories were first promoted as an assessment technique for New Zealand early childhood centres. A great deal of money has been spent on developing this approach and in providing professional development programmes to

guide teachers on the use of Learning Stories in centres. Teachers have collectively spent many thousands of hours carrying out Learning Stories on many thousands of children. At this point, however, there is little evidence about the effectiveness of the widespread use of Learning Stories to assess and enhance children's learning.

Margaret Carr's action research projects provide many examples of how Learning Stories can provide useful insights into aspects of children's learning (Carr 1998a, 2001). The New Zealand Ministry of Education (2004) resource for teachers, *Kei Tua o te Pae: Assessment for Learning: Early Childhood Exemplars*, provides additional examples of how Learning Stories can be used to record fascinating vignettes of children's experiences in early childhood centres. It is yet to be established, however, that Learning Stories are a practical and meaningful way to document the richness and complexity of children's learning during the early childhood years.

Although Learning Stories have been supported by a range of academics and practitioners (e.g., Bayes, 2006; Drummond, 2003), I would suggest that their use as an assessment technique is problematic. The concerns that I have raised can be summarised as follows:

- Difficulties with establishing the validity or 'accountability' of Learning Stories.
- Problems with the inclusion of subjective interpretations at the time of recording initial observations of children.
- The potential to make judgements on the basis of very small amounts of evidence.
- A lack of guidance on where, when and how often to make Learning Stories.
- Questions about the frequency and quality of collegial discussions about Learning Stories, when the Stories have already been written to include the interpretation of the person making the observation.
- Questions about how 'local validity' can be established when staff may have different perspectives, and when these perspectives may change over time.
- Concern that the situational specificity of Learning Stories may limit their value for assessment and planning in different contexts.
- Problems with defining the concept of 'disposition' and in selecting and defining particular learning dispositions.
- A lack of clear rationale for the links between certain dispositions and particular strands of the New Zealand early childhood curriculum, *Te Whaariki*.
- A lack of clear rationale for the selection of certain behaviours as indicative of particular learning dispositions.
- Problems with defining the behaviours that are used as indicative of particular learning dispositions.
- The suggested sequence of behaviours within a particular experience may often not apply and could potentially result in teachers missing out on important information in order to make their observations 'fit' the Learning Stories pattern.
- Problems in using Learning Stories to show changes in children's learning over time.
- A concern that the focus on dispositions in Learning Stories could lead to the neglect of the development of knowledge and skills.

The above concerns raise questions about the widespread use of Learning Stories in early childhood centres. Over the last ten years, Learning Stories have become the predominant form of assessment of young children in New Zealand. There is now an urgent need for a careful evaluation of whether Learning Stories are an effective and practical means of assessing and enhancing children's learning. Currently the theory and empirical evidence on

learning dispositions is not sufficient to support the continued use of Learning Stories as a major assessment technique in early childhood settings.

References

- Alcock, S. (2002). Review of the book Assessment in early childhood settings. *Early Education, 28*, 39-41.
- Allal, L. (2002). The assessment of learning dispositions in the classroom. *Assessment in Education, 9*, 55-58.
- Bayes, C. (2006). Provocations of Te Whaariki. In A. Fleet, C. Patterson & J. Robertson (Eds.), *Insights: Behind early childhood pedagogical documentation* (pp. 289-299). Baulkham Hills, NSW: Pademelon Press.
- Bone, J. (2001). Learning dispositions: Picking up the threads. *Australian Journal of Early Childhood, 26*(2), 25-31.
- Campbell, S. (1999). Making the political pedagogical in early childhood. *Australian Journal of Early Childhood, 24*(4), 21-26.
- Carr, M. (1998a). *Assessing children's experience in early childhood: Final report to the Ministry of Education*. Wellington, New Zealand: Ministry of Education.
- Carr, M. (1998b). *Assessing children's learning in early childhood settings: A professional development programme for discussion and reflection*. Wellington: New Zealand Council for Educational Research.
- Carr, M. (2001). *Assessment in early childhood settings: Learning stories*. London: Paul Chapman.
- Carr, M. (2004). *Assessment in early childhood education: keeping it complex, keeping it connected, keeping it credible: a series of three papers based on keynote addresses presented at Te Tari Puna Ora o Aotearoa/NZ Childcare Association national conferences (2001, 2002, 2004)*. Wellington, New Zealand: Te Tari Puni Ora o Aotearoa/ New Zealand Childcare Association.
- Carr, M., & Claxton, G. (2002). Tracking the development of learning dispositions. *Assessment in Education, 9*, 9-37.
- Coffield, F. (2002). Skills for the future: I've got a little list. *Assessment in Education, 9*, 39-43.
- Drummond, M. J. (2003). *Assessing children's learning* (2nd ed.). London: David Fulton.
- Hatherly, A. (2006). The stories we share: Using narrative assessment to build communities of literacy participants in early childhood centres. *Australian Journal of Early Childhood, 31*(1), 27-34.
- Hatherly, A., & Sands, L. (2002). So what is different about Learning Stories. *The First Years: Nga Tau Tuatahi. New Zealand Journal of Infant and Toddler Education, 4*(1), 8-12.
- Katz, L. (2002). 'Not all dispositions are desirable': Implications for assessment. *Assessment in Education, 9*, 53-54.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.

- Mislevy, R. J. (2004). Can there be reliability without "reliability?" *Journal of Educational and Behavioural Statistics*, 29(2), 241-244.
- Ministry of Education. (1996). *Te Whaariki: Early childhood curriculum*. Wellington, New Zealand: Learning Media.
- Ministry of Education. (2004). *Kei tua o te pae: Assessment for learning: Early childhood exemplars*. Wellington, New Zealand: Learning Media.
- Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods*, 1(2), Article 2. Retrieved October 9, 2007, from http://www.ualberta.ca/~iiqm/backissues/1_2Final/pdf/morseetal.pdf
- Moss, P. A. (1994). Can there be validity without reliability? *Educational Researcher*, 23(2), 5-12.
- Moss, P. A. (2004). The meaning and consequences of "reliability". *Journal of Educational and Behavioural Statistics*, 29, 245-249.
- Nuttall, J. (2005). Educators and children learning together: Reflections on the early childhood assessment exemplars. *Early Education*, 38, 63-71.
- Perkins, D., Tishman, S., Ritchhart, R., Donis, K., & Andrade, A. (2000). Intelligence in the wild: A dispositional view of intellectual traits. *Educational Psychology Review*, 12 (3), 269-293.
- Ramsey, K., Sturm, J., Breen, J., Lee, W., & Carr, M. (2007). Weaving ICTs into Te Whaariki at Roskill South Kindergarten. In A. Meade (Ed.), *Cresting the waves: Innovation in early childhood education* (pp. 29-35). Wellington: NZCER Press.
- Royce Sadler, D. (2002). Learning dispositions: Can we really assess them? *Assessment in Education*, 9, 45-51.
- Smith, A. B. (1998). *Understanding children's development: A New Zealand perspective* (4th ed.). Wellington, New Zealand: Bridget Williams Books.
- Smith, A. B. (2003 July). *Te Whaariki: Diversity or standardisation? Innovative aspects of the New Zealand early childhood curriculum*. Paper presented at Education in the Early Years: International Developments and Implications for Germany, Munich, Germany.
- Spencer, P. (2003). Review of the book *Assessment in early childhood settings*. *Early Years: An International Journal of Research and Development*, 23, 180-181.

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