Developmental Assessment and Learning Stories in Inclusive Early Intervention Programmes: Two Constructs in One Context

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Abstract
This paper critiques the differing foundations of the curriculum-based criterion referenced developmental assessment used by some early interventionists and the credit-based narrative assessment of learning dispositions used by early childhood teachers for the assessment of children with early intervention support. The assessment differences between some early interventionists and early childhood teachers that may compromise successful inclusion are raised. The development of an inclusive community of practice with teachers, parents, and intervention specialists is advocated.

Introduction
At the beginning of the 1990s a nation-wide inclusive early intervention programme was set up in New Zealand under the management of the Special Education Service (SES). It was designed to be a culturally sensitive and family-centered service. The programme supported the inclusion of children with disabilities within regular early childhood education settings. These features, together with a trans-disciplinary assessment practice advocated by Twiss (1994), were in line with best practice as indicated by overseas research (Barwick, 1998). The pattern of service followed an itinerant teaching – collaborative/consultative model. In this model, early intervention teachers, speech-language therapists, psychologists, and others work with early childhood teachers to embed a child’s developmental goals from their Individual Plan (IP) into curriculum activities and routines (Odom et al. 1999, cited by Cullen, 2000).

With the publication of Te Whariki in 1996, the SES early intervention community saw no difficulty in positioning its programme within the early childhood curriculum, pointing out that Te Whariki was above all inclusive (Twiss, 1996; Cherrington Peat & Ellis, 1996). However, as the implications of Te Whariki’s social constructivist theory of learning have become evident to teachers, the positioning of a developmental model of learning within this framework has begun to be seen as more problematic (Dunn, 2002; Cullen 2003, 2004).
Inclusion into early childhood centres for children with early intervention support has not been an unqualified success. Purdue, Ballard and MacArthur (2001) described some teachers abdicating responsibility for this group of learners. MacArthur, Purdue and Ballard (2003) referred to the ‘disability discourses’ used by some teachers who failed to engage in reciprocal activities with children with disabilities and saw them as ‘other’. Exclusionary practices were also observed by Bourke (2002). Cullen (2004) cited the barriers to learning both when unqualified support workers were ‘velcroed’ to ‘their’ child and when children were left on the fringes of activities without adult support.

One of the sources of difficulty in achieving successful inclusion in early childhood education may rest with the current pedagogical separation of teachers and early interventionists in New Zealand. The difference in educational thinking is illustrated by formative assessment practices. This paper critiques the two types of formative assessment used for children with disabilities in early childhood education centres: i) the curriculum-based criterion-referenced developmental assessment used by many early interventionists and ii) the narrative credit-based learning disposition assessment used by a growing number of early childhood teachers.

Illustrations of the differences are derived from a project to develop inclusive assessment exemplars (Dunn & Barry, 2004). The exemplars have contributed to a section on inclusion in the national Early Childhood Learning for Assessment Exemplar Project directed by Margaret Carr, Waikato University, and Wendy Lee, Educational Leadership Project, Auckland/Hamilton (Carr, Jones & Lee, in press). The project involved 6 day-long meetings with 8 teachers and 6 Education Support Workers from early childhood centres in the Waikato (5 kindergartens and 3 childcare centres). The reflections on inclusive assessment were recorded during the meetings. In addition, 14 early interventionists based in Hamilton were interviewed (8 early intervention teachers, 4 speech-language therapists and 2 psychologists). Learning stories from 27 children from 2002 to 2003 were discussed and 9 of their parents were interviewed. Transcripts of 10 IP meetings were analysed to consider the extent to which they reflected the use of the learning stories when setting IP goals. Teachers and parents were asked for their feedback on the IP meeting and on the IP goals selected.

The Appropriateness of Curriculum-based Criterion-referenced Developmental Assessment for Early Intervention Programmes in New Zealand

Early intervention staff commonly use assessment tools referred to as curriculum-based criterion-referenced assessment (Losardo & Notari-Syverson, 2001). Criterion-referenced assessment measures performance against a standardised criterion of a normal developmental patterns of skill acquisition. The skills identified in the assessment are then targeted for instruction, hence the descriptor, ‘curriculum-based’. Progress in skill acquisition as a result of teaching is evaluated using the
same measure. Examples of such tools include the Carolina Curriculum (Johnson-Martin et al., 1992), The Hawaii Early Learning Profile (Parks, 1992), and Developmental Programming (Schaefer & Moersch, 1981).

One of the most popular measures used by New Zealand early interventionists is Diane Bricker’s activity based model of assessment and curriculum planning, the Assessment, Evaluation, and Programming System for Infants and Children (AEPS) (Bricker, 1992). Early interventionists following Bricker’s model identify the developmental skills a child needs to use during activities that naturally occur in the child’s contexts, such as the early childhood centre. The early interventionist’s job is to structure child-oriented activities in order to encourage a child to practice an acquired skill or to learn a new skill for the particular context, according to the skills identified by comparing the child’s current skill levels with the developmental criteria in the model. If possible, they will work from an activity the child initiates, or embed their teaching in the child’s daily routines. As a curriculum-based criterion-referenced tool, AEPS has been rated highly in terms of its validity by Bagnato and Munson (1997). Because AEPS assessment involves a variety of perspectives and techniques, is conducted on multiple occasions, and considers a child’s skills within the context of naturally occurring and functional activities, it is considered to have validity in terms of functionality and usefulness for the early interventionist.

In New Zealand, however, the validity of using this process of ‘test and teach’ applied to developmental skills must be questioned because of the context in which it is applied. The curriculum-based criterion-referenced developmental model imposes a curriculum for children that is entirely different in emphasis from the NZ early childhood curriculum, Te Whariki, used in the centres that children with disabilities attend. A telling passage that highlights conceptual differences between the two models was written by Bricker and Cripe (1992, p.4/5), who described the goal of early childhood education as providing “general information acquisition and the improvement of language and cognitive skills”. They go on to say that this sort of general approach, with its lack of specificity, is inappropriate for teaching children with disabilities. Children with disabilities, they argue, need a behaviour analytic approach that directs teaching to targeted developmental objectives, albeit from within the activities available in an early childhood centre. This model is conceptually different from the socio-cultural foundation of Te Whariki.

The developmental ‘test and teach’ model has not gone unchallenged in the early intervention literature. Bruder (1997), reviewing the literature of the previous decade on the effectiveness of specific educational/developmental curricula for children with established disabilities, has questioned an emphasis on the assessment of skills according to developmental domains:
Even when curricula recommend the integration of areas into an intervention activity (Bricker & Cripe, 1992; Linder, 1993), assessments are structured into developmental domains. This focus results in an over-reliance on developmental descriptions of children according to developmental discipline areas, as opposed to a holistic integration of a child’s strengths and abilities.

Her concerns are pertinent to our concerns in New Zealand: using the AEPS or a similar curriculum-based criterion referenced assessment of development as our chief tool for early intervention does not link conceptually with the curricular constructs of *Te Whariki*. The mismatch does not only concern a holistic versus a domain view of a child’s learning but goes deeper. As Smith (1999) has stated:

There is no one path for development, according to socio-cultural theory . . . children, even very young children are active co-constructors of their own knowledge and understanding, rather than passive recipients of environmental events (p.7).

To overlay the socio-cultural base for *Te Whariki* with a model that prescribes an individualised programme for children with disabilities based on a criterion-referenced developmental model has to be challenged. Such a model is not in tune with the practice of early childhood teachers in New Zealand and, inevitably, teaching children based on such a model will be seen by teachers as a separate and different task. The risk is that children with disabilities will be excluded from critical learning contexts and instead their education will become the responsibility of the early intervention service.

**Authenticity of Narrative and Credit-based Assessment for Early Intervention Programmes in New Zealand**

If the use of curriculum-based criterion-referenced developmental assessment is problematic in guiding intervention programmes for children with early intervention support attending early childhood centres in New Zealand, can narrative credit-based assessment be used?

An alternative to curriculum-based criterion-referenced developmental assessment is a narrative credit-based assessment. An alternative to curriculum-based criterion-referenced developmental assessment is a narrative credit-based assessment. In contrast to assessing developmental skills, this considers the child’s developing learning dispositions. A learning disposition is an abstract concept which stems directly from the socio-cultural pedagogy on which *Te Whariki* is based. Carr (2001, p.5) has explained:
The traditional separation of the individual from the environment, with its focus on portable ‘in-the-head’ skills and knowledge as outcome, has been replaced by attaching social and cultural purposes to skills and knowledge, thereby blurring the division between the individual and the learning environment.

Learning dispositions are the outcome of repeated “situated learning strategies”. These in turn are based on the skills, knowledge and intent of the learner within the learning context, plus their motivation. Learning dispositions are aligned to the curriculum strands of Te Whariki and become the way in which children take an interest and become engaged in learning experiences, persist with difficulties or set themselves learning challenges, communicate and express themselves about what they are learning, and take responsibility for their own and other’s learning (Carr, 2001).

Narrative credit-based assessment considers developing learning dispositions. Assessment takes the form of “learning stories,” narratives written by teachers (and others) which describe learning dispositions in context. Learning stories are referred to as credit-based because they describe a successful learning moment for the child, on which teachers can reflect and build.

In the development of assessment exemplars to illustrate Te Whariki in action for children with early intervention support, Dunn and Barry (2004) found anxiety among teachers, parents, and interventionists about the authenticity of narrative assessment, particularly as regards its credit base. These are some of the comments made by teachers:

By focusing on the positives, we may not be giving the full picture. Reading the Learning Stories may mislead parents. This may not be fair. We may be building up false expectations for parents (Teacher meeting, 2002).

Up ‘till the meeting we will have been sharing learning stories with the parents. If these don’t illustrate the “problems” then the [IP] meeting will be a shock to the parents. All of a sudden the IP focus is on “needs”. How do we make sure the parent has the whole picture? (Teacher meeting, 2003).

While all of the parents described how much they valued their child’s learning stories, one of the parents also had this to say:

So do you think they describe accurately the way that he is?

I have difficulty in this area. I think they’re lovely [the learning stories] and that they give a general account of some
of the things he does some of the time at kindy, but you’ve got to be careful that you don’t read it and assume that every time he goes out to the slide he’s going to join in with another child and play. Or every time he’s required to share, that he will do those things. You can’t jump to that conclusion because you’ve read it once. And it might not be fair, and totally it’s not an overall accurate picture. It shows a little bit of his life and a little bit of what he can achieve at points in time (Parent interview, 2003).

“Snippets” was the word used by an early intervention teacher. She complained that the majority of the learning stories for a child with autism were about his successful interactions. She felt that the picture was misleading, because for the greater part of his time the child was playing alone at his early childhood centre. Similarly, the speech-language therapist for that same child said that what the teachers were referring to as ‘interactive language’ in their comments on the learning stories they had written was in fact ‘directive language’ on the part of the child. In other words, the learning stories showed the child speaking to other children and playing with them, but the stories were not representative of what he usually did, nor did they show 2-way interactive conversations.

These anxieties about the use of learning stories for children with early intervention support – that the picture the assessments may give is distorted – could be viewed as coming from misunderstanding about the authenticity of credit-based narrative assessment. The authenticity of this assessment concerns coverage, convergence, agreement, and leverage (Carr, 1999).

Coverage refers to the ability of an assessment to be considered in relation to previous assessments and as a predictor of future assessment results. Therefore narrative credit-based assessment must be considered in relation to previous assessments and as a predictor of future assessment results. The acquisition of skills is embedded in the learning experiences, therefore, it is (or should be) much more than an anecdote. The “categories of analysis” that Carr (1999) refers to in terms of coverage are not skills but learning dispositions.

Convergence refers to whether the assessment can be used to collect data from different sources and whether data can be analysed in different ways, and, finally, if the data can be formed into a cohesive picture. In narrative assessment, convergence is achieved by a process: the sharing of the “multiple lenses” of the readers – teachers, parents, and where possible, children themselves (Te One, 2002; Hatherly & Sands, 2002).
Agreement follows convergence. It refers to an agreement about the criteria (i.e. learning disposition) under discussion as part of the input of different perspectives from the range of people involved with a child (including, importantly, the child). These perspectives will vary, but there needs to be agreement about the criteria under discussion.

Leverage, or the purpose and value of the assessment, is to help the teacher extend the quality of the child’s learning experiences. To do this, the assessment should reflect the critical contextual features of the learning experience. The assessment may reflect the ‘voices’ of the child’s ‘knowing’ or culture, as well as the teacher’s reflective thought about what is happening. The assessment illuminates a teaching pathway that is uncertain and cannot be prescribed because it is an interactive one involving the child’s full participation as well as the teacher’s direction.

Finally, narrative assessment has to be credit-based, not because reading about what a child did in a particular context makes a happy story or simply reflects a child in a good light, but because it is reflecting an important learning moment for a child. Otherwise it is not useful in terms of a formative assessment in which scaffolds for learning are identified.

The Application of Narrative Credit-based Assessment for Children with Early Intervention Support

Dunn and Barry (2004) collected more than 500 learning stories. Analysis of these showed children who, regardless of disability levels, were active, interested, thoughtful, and excited about what they were discovering. Contrary to the traditional deficit picture of children with developmental delays, these children were included with their peers as Te Whāriki’s “competent and confident learners”. A typical example was this learning story about Samuel and “Mrs. McGarvey”:

I sat down with Samuel to read him a story, “Grandma McGarvey goes to School”. He stopped grizzling when I showed him the cover. He took the book and made a sound that showed his interest. Then he turned the book upside down. (The grandmother on the cover is doing a handstand.) “Ooh” he said. Then he turned the book again. He did this 3 or 4 times. Making interest sounds.

Later, the teacher reported that Samuel had got to the page where Grandma McGarvey was doing a handstand in the book and had closed the book. She had assumed Samuel was tired of the story, but then saw him looking at the cover and then opening the book to the same picture and giggling. The teacher, in consultation with the rest of the staff at the centre, wrote a “Learning Story” about this event:
Samuel was very interested in the pictures in the “Grandma McGarvey” book. This level of focus is unusual for him. He remembered the book and he sat through the story, making lots of pleased sounds. He was aware of the upside-down picture and tried to "fix" it, i.e. he was trying to problem-solve. We know from what his parents have told us that he enjoys a bedtime story, and he has brought that enjoyment into the kindergarten with him.

The teacher’s plans were to repeat the same stories over time and to expand Samuel’s understanding and use of language by teaching him giving words for the pictures that caught his interest, e.g. upside-down.

From an early intervention point of view, using learning stories for assessment includes the following advantages:

- data are collected in natural contexts;
- data are based on functional activities in familiar settings;
- data describe the environment in which the learning takes place;
- data include the roles of caregivers and peers;
- data are interpreted by the people, parents and teachers, who best know the child;
- identifies the zone of proximal development and
- identifies the child’s strengths (Dunn, 2000).

Developing teaching plans from this model is both easier (because the zone of proximal development is identified) and more productive, because teaching can be developed from the child’s strengths.

Another value of learning story assessment is that it can become a vehicle for inclusion, as the teacher increasingly sees the learner, not the disability. The criticism reported earlier in this paper that a narrative credit-based assessment for children with disabilities gives an overly positive spin on the “real” child implies that these children are defined by their delayed development. Positive learning stories are not felt to be a problem in assessing children who seem to be developing normally. Their learning moments are celebrated without caveats.

Dunn and Barry (2004) found further evidence of deficit thinking in most of the transcripts of ten IP meetings. Despite the existence of many exciting learning stories often referred to during the meetings, the goals set were usually prescribed by a corrective model. Not surprisingly teachers working with the project frequently
complained that IP goals did not relate to their learning stories. These were the goals set during a meeting for Samuel:

1. Samuel will consolidate morning tea routines.
2. Samuel will come in to get his pull-ups changed.
3. Samuel will put his clothes back on after changing.
4. Samuel will stay on the mat until his teacher tells him he can go.
5. Samuel will keep his hands to himself at mat time.
6. Samuel will play independently for longer at a time.
7. Samuel will not hurt other children when he gets agitated.
8. Samuel will respond to single word commands with non-symbolic support.
9. Samuel will respond to forced choice questions with the objects in view.
10. Samuel will continue to expand his use of signs and words at kindergarten.
11. Samuel will take turns when prompted.

Samuel, the active initiating learner with the interest in the upside down picture, is not evident in these goals. Interviewed shortly after the IP meeting, Samuel’s mother and teacher said that they were happy with the meeting and confident their voices had been heard. The teacher commented that there were rather a lot of goals set, and that she couldn’t remember what two of the language goals meant, but that the meeting had been very positive. So what had happened? Sometime during the meeting the child’s delayed developmental levels were ‘authenticised’ and became the ‘real’ basis on which to build his programme. Considering this, and several of the other IP transcripts, there seems to have been an automatic default to a deficit view of the child when considering the child’s education programme.

The reason for this may be due to a mistaken impression among some teachers and early interventionists that the holistic socio-cultural curriculum is skill-less. This mistaken view may be the legacy of removing the examples of Te Whariki-in-action from the 1993 draft document. Cullen (2003, p.282) has written: “A holistic approach acknowledges that the “whole is greater than the sum of its parts; it does not mean that there are no parts, or that we cannot identify component skills that would help the child achieve their interest-based goals.” The key words here are the child’s interest-based goals. What is important is that the IP goals reflect these
goals. There is no reason why *Te Whariki* can not be used in an inclusive way to foster the learning experiences and skills of all children. But slotting developmental skill IP goals under *Te Whariki* strand headings and teaching them, as advocated by Twiss, Stewart and Corby (1997) and Thorburn and Corby (2002) misses the point of the underlying differences between a deficit-developmental model and a constructive-active model.

**Discussion**

An interesting study by Lepper, Williamson and Cullen (2003) used learning stories to inform IP goals for two children with early intervention programmes. All participants, parents, teachers, early intervention staff, support workers and hospital specialists shared professional development on writing learning stories. What they found when they assessed the children in this way was that agreed IP goals arose from the assessments very easily. Key outcomes were the empowerment and the strengthening of relationships for *all participants*. A parent commented on the removal of the different professional languages that had previously confused her, while the support workers talked about being on a level playing field with the professionals. The professionals also commented on the value the process had of overcoming an expert model. While people shared what they saw as important from their own perspectives, the common approach meant better communication and strengthened teams.

The power of learning story assessment to enhance communication among adults was also reported by parents (Dunn & Barry, 2004). Parents repeatedly said that they were delighted that the teacher was “seeing” their child. “Seeing their child” meant the whole child as a person, the “little quirky things” as one parent put it. This indicated to parents that the teacher knew their child and believed in the child’s learning. This was what parents most wanted. When a parent said of their child’s folio, “My husband and I were saying last night we will treasure this [the folio] forever,” they weren’t talking about a description of their child’s developmental progress. They were talking about “learning stories” of their child attending an early childhood centre and being included as a learner. However, in the Lepper et al study (2003), only the teachers and support workers discussed together writing learning stories and what they were seeing. Early intervention staff did not attend those meetings. The lack of fit between Samuel’s IP goals and his learning stories is almost certainly related to the lack of a common language between early intervention staff and teachers which has affected many children’s IP development.

This paper has described the assessment practice of two educational groups, some early intervention staff and some early childhood teachers. It suggests that the difference in these approaches is an expression of differences in views of the child and the curriculum of the two groups. It also suggests that successful inclusion for
young children with early intervention support may be compromised by a lack of shared direction among professionals.

MacArthur and Dight (2000 p.44) urged a more collaborative approach between early intervention staff and early childhood teachers, citing the reminder by Giangreco et al. (1997) that “students do not attend early childhood services to receive support services. They receive support services so that they can participate in early childhood services.” Cullen (2004, p.78) has advocated for community-based and participatory collaborative projects to build a community of practice:

> When all participants in early intervention provision understand the co-construction principle that underpins the inclusion vision, change should be effected at three levels. Firstly, shared professional knowledge should articulate with systems and policies to support coherent service delivery… [in terms of closer links between Early Childhood Development (ECDU) and early intervention services (GSE) under the umbrella of the Ministry of Education] Secondly, a co-constructive philosophy also leads participants to view their contribution collaboratively rather than through an expert lens, in which one form of knowledge, the experts’ is privileged over another . . Third, at the implementation level, when children’s contributions are acknowledged as a primary source of curriculum, the interest-skills divide can be seen in clearer perspective.

Convergence of thinking may not come easily. In terms of the ‘big picture’ in the early childhood education system in New Zealand, early intervention has yet to develop a common framework. The lack of any reference to early intervention provision or to children with disabilities in the Ten Year Strategic Plan for Early Childhood Education (Ministry of Education, 2001) has been explained away by some as ‘inclusionary’. But, like the “ghost/guest” child described by Meyer and Bevan-Brown (2000, p.153), this may be a situation “where one is ‘invisible’ [or] where one’s presence is acknowledged but one is clearly treated as an outsider.”

Wesley and Buysse (2001) suggest that specific approaches can be used to bring staff together around a shared framework, including, for example, sharing the inquiry, trying out creative ways of working together with parents, teachers and early intervention staff to develop “collective reflection” that can inform practice. This is both an exciting as well as an urgent prospect. We should develop an inclusive community of shared practice between teachers, parents, and intervention specialists coming together for pedagogy, assessment, teaching and learning in early childhood education. Over the long term, what should arise from this development is a uniquely New Zealand early childhood approach to early intervention.
References


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About the Author

Lesley Dunn is a field-work psychologist working for the Ministry of Education Special Education Group in the Waikato. She has had a long involvement with early intervention work, setting up Dawnstart-based programmes in Southland and Taupo in the 80’s, and working in the early intervention teams in the Waikato since she came to Hamilton in 1992. In 1998 she became interested in the potential for learning stories to support the reflective practice of Education Support Workers (ESWs) in maximising social opportunities for the children they were working with and developed training in this area. She published these experiences in *Infants and Young Children* in 2000, and in 2001 Margaret Carr invited her to join the co-ordinator team working on the Early Childhood Assessment for Learning Exemplar Project. The project to develop “inclusive” exemplars, referred to in this paper, arose from this work. Lesley has now started working on a doctorate part-time via Massey University. She is studying communities of practice (i.e., parents, early childhood educators, and early intervention personnel) that centre on the development of Individual Plans (IPs).
Once off developmental assessments appear not to be beneficial in terms of population screening for these disorders. There are also concerns that such programmes may lead to anxiety, unnecessary referrals, and missed cases. This is often complicated by unclear referral pathways and inadequately resourced secondary services. There are no specific recommendations from published reports with respect to population-based surveillance programmes to aid the early identification of developmental and behavioural disorders in children. Parents value early diagnosis. There is some evidence that early intervention improves outcome and quality of life for children and their families. Recommendations Staff training in the recognition of childhood developmental delay and. Early childhood intervention (ECI) is a support and educational system for very young children (aged birth to six years) who have been victims of, or who are at high risk for child abuse and/or neglect as well as children who have developmental delays or disabilities. Some states and regions have chosen to focus these services on children with developmental disabilities or delays, but Early Childhood Intervention is not limited to children with these disabilities. Early Childhood Intervention (ECI) is an important area both at policy and professional levels. It relates to the right of very young children and their families to receive the support they might need. ECI aims to support and empower the child, the family and the services involved. It helps to build an inclusive and cohesive society that is aware of the rights of children and their families. Families were directly involved in one of the work meetings, as well as in the validation phase of the project (see page 7). In total, five meetings were conducted during the project - four work meetings and a final seminar. The main objective of the work conducted during the meetings was to reflect upon and then provide concrete proposals concerning the following issues identified in the first meeting.