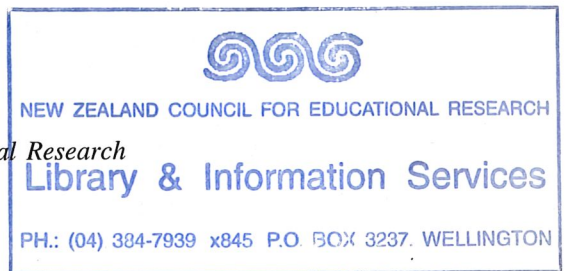


Shifts in Thinking through a Teachers' Network

LINDA MITCHELL, *New Zealand Council for Educational Research*



ABSTRACT *This article describes the organisation of a teachers' professional network and the teachers' use of 'pedagogical documentation' to analyse, reflect on and critique pedagogical practice. It explores ways in which a forum and process were created for teachers to think about assumptions, values and the purpose of education, explore reciprocal influences of teachers' and children's interactions, and deepen opportunities for parents and children to contribute to the curriculum. It discusses policy and practice implications and points to ways for engaging in a broader debate.*

Keywords: *pedagogical documentation, teacher networks, teacher development, children, parents, educational policy*

Background

The value of early childhood education in New Zealand is often described in relation to children's learning, development and well-being, as well as in relation to support for families and labour market goals, such as childcare for families in paid employment. However, we seldom take the time to examine the broader issues concerning the nature and purpose of early childhood education and its role in laying the basis for the kind of society we want.

Moss and Petrie (1997) have noted that at the heart of the dominant discourse about children, parents and society are notions that 'children are the private responsibility of parents; children are passive dependants of parents and recipients of services; and parents are consumers of marketised services ...' (p. 4). Such notions have been readily identifiable in New Zealand, for example in the previous government's willingness to allow the market to determine provision without any governmental planning or co-ordination. Moss and Petrie have recommended 'a different discourse on the relationship between children, parents and society within an alternative intellectual and ideological framework' (p. 11).

In 2000–2001 New Zealand's Labour-led government provided an opportunity for sector representatives to develop a long-term strategic plan for early childhood education. This plan recommends a transformed, responsive role for the government which would work in partnership with early childhood services to plan, provide and support early childhood education (Early childhood education long term strategic plan working group, 2001). For early childhood education in New Zealand, this is a time of opportunity, a chance to construct new frameworks.

The present project [1] is aimed at contributing to discussion of such new frameworks. My broad objective is to help generate critical thinking and discussion about the role and work of early childhood education centres, with teaching and learning in early childhood education centres being a starting point. Thinking and discussion is being examined in three sites:

- a network of early childhood teachers from within the kindergarten sector;
- a focus group of government officials, employer and union representatives and teachers; and
- participants in public forums.

This article will describe the organisation of the teachers' network and teachers' use of pedagogical documentation to explore ideas and practice. This approach was essentially a form of professional development using action research methods, which seemed to assist teachers to:

- think deeply about assumptions and values, including broader goals of education;
- explore teaching and learning within their own early childhood centres; and
- start to create new practices and deepen opportunities for parents and others to contribute to the curriculum.

The article will discuss research evidence about action research for early years educators, and policy and practice implications.

Data gathered included audio recordings of network meetings, individual interviews with teachers and the senior teacher at the beginning and end of the network project, and analysis of some examples of pedagogical documentation and of teachers' journals kept during the course of the network project.

Organisation of the Teachers' Network

The teachers' network was a group of 16 teachers from six Wellington kindergartens [2] who met together with me (as researcher) and a senior teacher (whose job is to provide professional advice and guidance to kindergarten teachers) about once a month from May 2000 until April 2001 to critically analyse and discuss 'pedagogical documentation' from their work in their kindergartens. Over the year there were 11 network meetings and a special network meeting in which Gunilla Dahlberg (Professor of Education at Stockholm Institute of Education) was a participant.

An enduring principle was that network teachers would work from Te Whāriki's [3] aspiration for children 'to grow up as confident and competent learners and communicators, healthy in mind, body, and spirit, secure in their sense of belonging and in the knowledge that they make a valued contribution to society' (Ministry of Education, 1996, p. 9) and from a perspective of the child as 'rich in potential, strong, powerful, competent and most of all connected to adults' (Malaguzzi, 1993, p. 10).

Following the first day-long meeting, subsequent meetings were 4, then 3 hours long, held in the afternoon sessions when the kindergarten had teacher non-contact time. Most meetings followed a format where teachers from selected kindergartens presented pedagogical documentation for discussion.

Dahlberg *et al.* (1999) described pedagogical documentation as 'a tool for reflecting on pedagogical practice and as a means for the construction of an ethical relationship to ourselves, to the other and the world—what we have termed the ethics of an encounter' (p. 145). They differentiated between pedagogical documentation as process and as content in that process.

'Pedagogical documentation' as content is material which records what the children are saying and doing, the work of the children, and how the pedagogue relates to the children and their work. This material can be produced in many ways and take many forms—for example, hand written notes of what is said and done, audio recordings and video camera recordings, still photographs, computer graphics, children's work itself, including, for example, art done in the atelier with the atelierista. This material makes the pedagogical work concrete and visible (or audible), and as such is an essential ingredient for the process of pedagogical documentation.

This process involves the use of that material as a means to reflect upon the pedagogical work and to do so in a very rigorous, methodical and democratic way. That reflection will be done by the pedagogue alone and by the pedagogue in relationship with others—other pedagogues, pedagogistas, the children themselves, their parents, politicians (Dahlberg *et al.*, 1999, pp. 147–148).

At many meetings, in addition to pedagogical documentation, discussion occurred about articles, a video, or a theme of interest. At one meeting, a professional development co-ordinator from a government agency and staff from a childcare centre presented and discussed their work and ideas with the network teachers. Suggestions for themes came from any member of the network. By March 2001, teachers had become particularly interested in exploring more about parents' perspectives and parent involvement in children's learning. We saw and discussed the video 'Involving parents in their children's learning at the Pen Green Centre' (Pen Green Centre, 2000). At this meeting we introduced the notion of journal writing and some teachers subsequently kept journals.

I established links with the employer and parent body by discussing the work and ideas emerging from the network through presentations at their council meetings in August 2000 and July 2001. One of their representatives will also be invited to take part in the focus group later this year, to discuss a series of papers written by me from themes arising from the network. These themes will include conceptions of children, the role of early childhood services, and policy, funding and systemic support for early childhood education.

Action Research and Linkages to Enhanced Pedagogy in Early Years Settings

Pedagogical documentation is identifiable as a form of action research, with the processes of pedagogical documentation, discussion and reflection in the network, planning, and acting, following an action research spiral. Action research is defined by Carr and Kemmis (1986, p. 162) as:

a form of self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practices, their understanding of these practices, and the situations in which the practices are carried out.

They asserted that three conditions are necessary for action research:

- the subject is a form of social practice which is seen as open to action and capable of improvement;
- the method of action research is a self-reflective cycle of spirals of planning, acting, observing and reflecting; and
- the project includes those responsible for the practice and is based on collaboration.

Critical reflection leading to changed practice is a part of action research. Action research is research for education, not research about education and contributes to educational practice.

MacNaughton (1996) has argued that emancipatory action research is particularly suited to research that is aimed at reducing educational inequalities, by improving children's and adults' educational experiences. Emancipatory action research is a process whereby 'people explore the ways in which their practices are shaped and constrained by the wider social structures' (Atweh *et al.*, 1998, pp. 23–24).

An action research methodology was chosen for the current study because its participatory, emancipatory and practical nature suited the dual purpose of the study—to provide a forum and tools to assist practitioners to examine and change their practice, and to open up new frameworks arising from practice about the role of early childhood education within a democratic society. The teachers had all volunteered to take part after I had explained the purposes of my study and what was involved in participation in the network. In initial interviews, most participants said they were attracted to the network because of the opportunity to work in collaboration with a researcher, their interest in making a contribution to a broader policy discussion, and the opportunity to benefit their own practice. They had a commitment to improving early childhood education within New Zealand, as well as critiquing and changing their practice within their own kindergartens.

Evidence on linkages between action research as a strategy for professional development, and change and development for practitioners, indicates that characteristics of the practitioners have an influence. The Principles into Practice in Early Childhood Education Project (Blenkin & Kelly, 1997) used an action research methodology involving a researcher working with early years staff in 67 early childhood settings (including 11 pilot settings). The staff were trained and untrained, and had different professional backgrounds and responsibilities. The practitioner's evaluation of the effectiveness of the programme was compared with the research partner's evaluation of evidence of development. From the 11 pilot case studies, Blenkin and Kelly (1997) distilled factors that related to the 'successfulness' of the programme.

- The practitioner's personal motivation and confidence in their practice. Development did not take place where practitioners were not motivated. As well, the practitioner seemed to need to be confident to develop his/her own practice rather than regard the professional development as a passive training opportunity. Some appeared to be inhibited by the presence of academic staff or making their practice public.
- Training of staff. In most but not all of the successful case studies there were trained teachers as opposed to untrained staff.

- Practitioners in control. Those practitioners who took control of the direction of their action research and made their own observations alongside evaluations made the most progress. Some needed help to do this.
- Individual versus group work. Working with groups of practitioners with different needs and goals seemed to inhibit progress. However, Blenkin and Kelly (1997, p. 11) noted that this issue warrants further investigation. Some evidence shows that there is value in practitioners comparing notes.

The second phase of the study (Blenkin & Hutchin, 1998) provided evidence of ways in which practitioners' observations were used to develop thinking and practice. It showed interdependence between the practitioner's ability to observe children closely, the practitioner's response to child observations which challenge her/his assumptions about what the child is experiencing, the practitioner's disposition to change, and support from within the institution or outside.

There is evidence from two New Zealand and two Swedish studies of the effectiveness of action research involving practitioner researcher collaboration aimed at influencing practitioner's interactions with children. The focus of the programmes was on interactions to extend children's thinking, one through examining the child's questions (Carr *et al.*, 2000), another through scaffolding children's learning (Jordan, 1999), a third through the adult role of mediating between the child's experience and the environment (Palmerus & Pramling, 1991; Pramling, 1996), and the fourth through a programme developing ways in which early childhood students in pre-service training deal with children's life questions (Pramling Samuelsson *et al.*, 2000).

In common these programmes focused on children's experiences, and adult interactions related to these. Adults were encouraged to analyse their own interactions and extend them, e.g. by expanding or going beyond the here and now (Palmerus & Pramling, 1991), and by scaffolding or targeting the child's knowledge and stretching it out to a higher level (Jordan, 1999).

Features of these professional development or teacher education programmes were the presence of outside support, the active participation of practitioners, extended time to engage in the programme (time periods ranged from 12 to 30 months) and a 'whole centre' approach, enabling all adults to develop shared understanding and take consistent approaches.

These factors described above as influential in respect to participants were largely present in the current study. Selection of participating teachers was based on the following criteria.

- All teachers in the kindergarten were enthusiastic and wanted to be involved. They were committed to the project for 12 months.
- Staff were all registered teachers. In New Zealand, teacher registration is available to staff who have a Diploma of Teaching or equivalent qualification (obtained through a 3-year full time course at a tertiary institution, or longer field based or part-time course) and are assessed as 'competent to teach'.
- There was unlikely to be staff turnover during the year.

However, in one kindergarten only one teacher from a two-teacher team participated, and she moved to a new kindergarten during the project. She later described the difficulty for her in trying to explain and involve the other teacher.

The focus of pedagogical documentation and methods used to gather documentation were chosen by each of the kindergarten teams. Each kindergarten had its own unique

culture and philosophy. Another theme that emerged from participant interviews was that different teams had different needs and goals, and some thought that the programme could have been enhanced by a stronger emphasis on developing understanding of each others' backgrounds, or by working with a more homogeneous group. This relates to points made by Blenkin and Hutchin (1998) above.

Carr and Kemmis (1986, p. 202) made distinctions between 'top down models' and 'practical and emancipatory' models of action research. They warned that 'technical action research' can occur when an outside facilitator or researcher co-opts practitioners to work on the researcher's issues rather than develop their own focus. In this study, both the researcher and professional development facilitator were aware of power imbalances: I had been a union leader whom many teachers knew as their industrial advocate and now held power as 'an expert researcher'. The senior teacher was responsible for professional development and standards within the participating kindergartens. In our initial discussion of roles and power relationships, and our ongoing informal monitoring of network meetings we continued to consciously examine our roles and relationships. Tripp (1990) considers that in developing a critical professional community, it is important to balance autonomy with assistance. We identified our role (and discussed this with participants) as:

- offering information, ideas, resources (e.g. access to video recorder) and research readings;
- helping teachers to articulate their practice, plan and monitor their work;
- asking critical questions;
- supporting teachers; and
- participating in sessions.

In addition, the senior teacher visited two of the kindergartens between the network meetings to offer professional advice and support.

We negotiated with network participants a contract for how we would operate as a network, including the confidentiality and respect for participants' work in the group, how we could enable network members to have collaborative and constructive discussions, relationships amongst ourselves and permission for using work.

The Network as a Forum for Reflective Discussion about Teaching and Learning

One question raised in my project is the role of early childhood education in relation to the kind of society we would like. Giroux (1992) summarised his educational philosophy using a distinction made by John Dewey between 'education as a function of society' and 'society as a function of education'. Giroux (p. 18) argued that schools are the major institutions for educating students for public life. A question, therefore, for those involved in education is the extent to which educational institutions—schools, early childhood centres, tertiary institutions—reproduce society and the extent to which they build society.

How can we develop an early childhood education that is based on a conception of the competent child who is active in constructing knowledge, that welcomes and responds to diversity and the contributions of children, families and others to the curriculum? Recent critiques of the 'discourses' of early childhood education argue that the knowledge base of the field perpetuates inequalities, prejudices and positions of power, and reduces questions of value to questions of fact (e.g. Dahlberg *et al.*, 1999; Cannella, 1997). In this view, a challenge for early childhood teachers is to actively

create educational goals, critically examine assumptions and become open to multiple perspectives so that early childhood centres can create an education suitable for that time, those people and that place.

Such an approach fits well with the socio-cultural basis of Te Whāriki and its wide definition of 'curriculum' as 'the sum of the experiences, activities and events, whether direct or indirect, which occur within an environment designed to foster children's learning and development' (Ministry of Education, 1996, p. 10). It also fits with thinking in New Zealand that a goal for Maori educational advancement is to prepare students for active lives within Maori society (Durie, 2001, p. 4). This will require access to local knowledge and a local approach that brings in the knowledge and skills of community members, rather than a universal approach.

The network experiences seemed to assist teachers to step out of their shoes and 'see with other eyes'. Teachers identified a range of purposes for pedagogical documentation. Some key purposes were:

- to question assumptions, values and beliefs about broader goals of education;
- to open up the process of teaching and learning for critical analysis. Teachers regarded pedagogical documentation as valuable for getting to know children because it encouraged them to focus on individuals, use understanding of children in planning, examine inequities and ensure that all children were given attention;
- to share with others and so create opportunities for others to contribute to the curriculum;
- to celebrate the kindergarten by offering a 'window' for the community to see what happens in the kindergarten, programme or curriculum; and
- to provide opportunities for children to reflect on their own activities.

The following examples explore interactions that took place during network meetings and related discussions and interviews with teachers about their learning from these interactions.

Thinking Deeply about Assumptions and Values

Our focus on the competent child as a basic principle for our work was reinforced when the network worked with Gunilla Dahlberg in July 2000 and heard her speak about constructions of the child (Dahlberg, 2000). Throughout this time, some of our network discussions were about current theories.

At the same time, two teachers from Otaki Kindergarten had offered examples of work that were grounded in their philosophy 'Whanau, tamariki, kaiako. Working together to create an environment for learning, where the mana of each child is nurtured' [4]. The teachers had documented the children and community working together to make a concrete wall at the kindergarten.

In their documentation, there was a lovely sense of interdependence as children and adults worked together, collaborated and relied on each other. Children and adults listened and negotiated, coming to agreements, sharing and learning skills. Roles were shared. Some children gave ideas on how to do things, others were 'doers', getting into the thick of concreting. Children's theories were respected. The kindergarten itself was a community operating on democratic principles. As well, it involved collaboration with the wider community: council workers making a concrete path outside the kindergarten, a reporter who took a photo and wrote a story for the local newspaper, a garden shop

that donated tomato boxes in which to mould concrete blocks, a teacher who brought her wheelbarrow from home, parents who came and helped.

At the 1998 international conference, 'The city of the possible', held in Naples, Bruner (1999) spoke about the admiration in which he held Gian Battista Vico and Vico's recognition of ways in which human beings both live in reality and create the reality in which they live. Childhood is one arena, he argued, in which we can make it possible to create a world. He reflected on views coming through the conference that 'having a sense of place, knowing where you are, somehow helps you develop a sense of your own personal identity, your uniqueness, as well as your place in the world' (p. 6).

The children at this kindergarten were creating their own local culture and building traditions that were to continue. Children were developing a 'sense of agency' (Bruner, 1999, p. 6), as they worked on meaningful projects that they had planned, developed themselves and succeeded in doing well.

Our discussions of theory and practice raised questions for other teachers about their own practices and the value of engaging with children in practical 'real life' activities rather than manufactured activities. They also raised questions for teachers about children's capabilities.

We see the influence of these discussions being played out when we consider the responses of Jenny from East Harbour Kindergarten to her thinking about such issues. Jenny spoke of the 'shake up' in ideas that occurred for her.

My challenge is to really look at those dominant discourses and when I do document to actually reflect on my own practice. That's what I haven't done in the past. I haven't said "Why do I write that?" Just because that's what I think I should write in a developmental way. And I don't know where I am getting ideas about what I should write about the child, what I should choose. And there's a paragraph here [Dahlberg *et al.*, 1999, p. 152] about how we always exercise power over ourselves and true documentation is to unmask [the dominant discourses which exercise] ongoing power [on and through us] by which we construct the child and ourselves. And when I trained, which is not so long ago, my training was about cognitive, social and physical development. It's really brought me to a halt actually. It's a bit of a shock (Jenny, Network Meeting 4, July 2000) [5].

Discussion of new ideas, and support to make sense of these in relation to practice seemed to assist teachers to recognise their own biases and to encourage experimentation with new ways of acting. These insights led Jenny's teacher team to work with children in 'empowering ways'. Jenny described this changed approach when a new fence needed to be built at East Harbour Kindergarten. The approach had also been stimulated by seeing the community involvement in Otaki Kindergarten's concrete wall work, although the projects came from different bases and understandings.

We're starting to get more into group projects. And I'm changing my thinking so much in that we are getting a fence built and before I'd have been ringing up a builder to get a fence built. I've shifted my thinking. Well actually, we shouldn't be asking a builder. We should be asking the children to build the fence (Jenny, Special Network Meeting, July 2000).

A common experience was to feel 'shaken up' by the network experiences and to be prompted to re-think fundamental ideas, as we see in the next example.

Jeanne said that network discussions were a catalyst for the Maraeroa Kindergarten

team to think about the purpose of education and to take a holistic approach that brought together goals, teacher interactions and the environment.

It got us right back to the question of 'What do we think we are doing?' 'What have we as teachers to contribute?' 'What is the environment?' That brought us right back to square one. Not this impact, that impact. It's all like bits (Jeanne, Network Meeting 4, July 2000).

There is an impression of a more analytic approach to teaching and learning founded on thinking about broad goals for education. Teachers were starting to explore for wider meaning, things that they had taken for granted. Stewart (2000), writing about New Zealand school principals who were engaged in a principals' mentoring group, noted the importance of shifts in thinking. 'It was an accepted maxim that "you best change what teachers do by changing the way they think about what they do"' (p. 149). Network teachers said that discussion of their own pedagogical documentation and that of others and the stimulation of speakers and readings were all valuable. Some said they had not accessed readings to such an extent before. What was crucial was the talking, thinking and critiquing of ideas in respect to individual values and contexts.

Exploring Teaching and Learning

The focus on goals of education and critique of biases went alongside exploration of reciprocal influences of teachers' and children's interactions. Consistent with their own goals for education, teachers started to dig deeper into how their responses influenced children and how they could respond to children's interests and theories. We saw this working in the following example.

Teachers at Hataitai Kindergarten had set up an experiment on mould after a banana had been left on a windowsill over the weekend and had started to go mouldy. The teachers placed the banana, a peanut butter sandwich and a carrot on a tray. Children in three groups with different teachers were asked to speculate on what would happen to them and then to observe changes over time. Most children in the first group discussed shapes (e.g. "It will turn into a heart", "It might turn into an oval or square shape"). The teacher, Anne, thought that her preceding discussion of shapes might have influenced the children's responses in this new situation. A similar effect happened with the second group, with children suggesting the food would change into another type of food (e.g. "carrots going to turn into the banana", "sandwich will turn into a sausage" or a different colour).

This presentation led into network discussions on questioning children.

Reena:—Children thought it was a trick question.

Coleen:—Questions are really important. You have to really think about them.

Anne speculated that discussion in her group about shapes had arisen because she had asked how the children wanted the food arranged on the tray. The senior teacher, Viv, reminded Anne that Reena's group gave the same kind of response but had not been asked how they wanted the items arranged. Was it the questions that influenced answers?

Viv:—Remember all that stuff on Piaget and the way he questioned children to get the answers that everyone thought and believed was gospel for years and years and years. And then they realised that he just used a different style of questioning. And it didn't have very much to do with children's knowledge.

Anne:—I think it's very hard to ask questions if you've got no indication of where you want the answer to go.

Viv:—... What if you didn't ask questions?

Coleen:—Yes. I think I'll be sneaky. I'll stand around and I'll write down what they're actually saying.

Viv:—We don't actually ask questions if we really don't know the answer (Network Meeting 3, June 2000).

The discussion continued at the next network meeting when these teachers presented further work with their children about the mould experiment. They had changed their approach to one that started by listening to comments and questions from the children rather than asking questions themselves. At this meeting teachers discussed the extent to which Hataitai Kindergarten teachers had engaged in testing children's prior knowledge rather than talking to children about their working theories. This led into discussion on when to extend theories (is it possible at mat time, and is it appropriate to have mat time?) and how to work with a child about his/her theory that "fresh air makes everything clean".

In a presentation to the network, teachers from this kindergarten described some of their learning and conclusions.

We all felt that unprompted comments, observations and questions from the children were a very valuable, perhaps the most valuable start to conversations and discussions (Presentation by Hataitai Kindergarten teachers to Network Meeting 4, July 2000).

Other network teachers also learned from these discussions.

When Hataitai teachers talked of the mouldy sandwich, we went and evaluated and looked at how we were questioning children. It made us aware (Nikki, Second Interview, November 2001).

In this episode, the analysis seemed to help teachers think about the interactions they have with children and the activities they set up in relation to their views about teaching and learning.

Creating New Practices and Opportunities for Parents and Others to Contribute to the Curriculum

One discovery for most teachers was how the use of pedagogical documentation could contribute to building democratic communities within kindergartens by deepening opportunities for parents and children to contribute to the curriculum. Pedagogical documentation enabled teachers to lay open their practices and show learning processes over time. Sharing documentation had a particular value of providing a base to discuss teaching and learning with others who were not present when the documentation was taken, e.g. teachers employed part-time and parents. Teachers thought discussion of pedagogical documentation was particularly valuable in generating involvement from parents and in enabling the child to reflect on what she or he had done.

By sharing your documentation, you're sharing each person's knowledge of that child (Anne, Network Meeting 3, June).

The next examples illustrate how pedagogical documentation was used to involve others: a parent who was asked to interview her child about some kindergarten

equipment and children from two kindergartens who used documentation to reflect on previous work.

Coleen described how a parent interviewing her daughter about the daughter's views of *mobilo* at the kindergarten revealed that the daughter was prevented from playing with *mobilo* by some of the kindergarten boys. "The boys won't let me." Neither the mother nor teachers had been aware of this situation. Teachers then worked with the child to help her to assert and achieve what she wanted to do.

Using documentation children could revisit and think about what they had done before. This enabled them to build on previous work. The Otaki Kindergarten team described how children in their kindergarten referred to photographs of a 'wrestling match' which the children had organised 6 months before. They had devised rules and laid out mats in a particular way. The children scrutinised the photographs to remind themselves of the set up and rules. The children went on to replicate the set up for the match almost exactly. Anne described how a girl at Hataitai Kindergarten remade a *mobilo* construction in exactly the same way as a previous construction after examining a photo of it.

These examples highlight some ways in which pedagogical documentation can open up the kindergarten as a learning community. This also requires an enquiring and reflective culture. As Gunilla Dahlberg writes:

Documentation as a learning process, but also as a process of communication, presupposes the creation of a culture of exploration, reflection, dialogue and engagement. A culture where many voices—of children, pedagogues, parents, administrators, politicians and others—participate and can make themselves heard, and through that ensure that a multiplicity of perspectives can be scrutinised and analysed (Dahlberg *et al.*, 1999, p. 154).

Discussion

The teachers' network and use of pedagogical documentation offered a forum, as well as tools and processes for teachers to critically analyse, reflect on and appraise the goals of education, their own beliefs, own values and pedagogical practice. In doing this they were able to open up their practice for the involvement of parents, and for children to take an active and reflective approach to their own learning. At the heart of this way of working is an understanding that education is a generative activity that is constructed and re-constructed in different times and different places by different participants.

Elliot Eisner (1985) wrote that the orientation among curriculum theorists and administrators has been to 'develop a scientifically based technology of curriculum and teaching' (p. 363). This would leave little to chance and bypass the judgements, interpretations and 'artistry' that he thinks are crucial in teaching. The network teachers applauded artistry and their participation showed their commitment to exploring complexity and difference.

If early childhood education centres are to be learning communities for teachers as well as children, parents and others, there need to be opportunities within the work environment for reflection, experimentation, documentation and planning. The network was invaluable in offering time and space for critical discussion with colleagues, professional support from readings and opportunities to work with researchers and professional advisers. This was only possible because of the willingness of teachers to participate, the organisation of kindergartens to have non-contact time on a regular basis

every week and the commitment of the employer to teachers' professional development. But teachers from many other early childhood centres in New Zealand have little or no non-contact time. I believe that professional renewal should be a key objective for those involved in early childhood education. This requires attention to a work environment that can offer 'intellectual space' to foster professional growth and debate.

On a practical level this could mean:

- physical conditions and materials to enable documentation and discussion of the nature and purpose of teaching and learning (these could include tools such as a camera, audio-tape recorder, video-tape recorder, a printing budget, tables of adequate size and height to lay out documentation, computers);
- access to professional advisers who are able to work in the centre as well as with wider groups;
- a research community that engages with teachers in useful discussion of research and thinking about educational practice and theoretical ideas;
- adequate financial support for staff to have time during the working week for reflection and discussion;
- centre management who take responsibility for ongoing professional development;
- teachers who place a high priority on their professional growth;
- for parents in paid employment or training to have an opportunity to engage with their early childhood centres. This could require their family responsibilities to be acknowledged in their workplaces and training organisations.

The generation of a culture of openness and reflection goes beyond mechanistic solutions. It requires political will and far reaching changes in the wider 'discourses' about children, parents and society. In the next phase of this project, I want to contribute to thinking about such discourses by preparing a series of papers based on themes emerging from the network experiences for discussion by officials and a wider public. My dream is for children's educational interests to be accorded political priority and for recognition of the role of early childhood centres as a base for a democratic society.

Acknowledgements

I would like to acknowledge the teachers and senior teacher who took part in the network for their commitment to thinking and action in the interests of their children and families and their willingness to share their work and understanding.

NOTES

- [1] My project was deeply influenced by my visit to Gunilla Dahlberg at the Stockholm Institute of Education in 1997 (Mitchell, 1998) and the work of the Stockholm Project (Dahlberg *et al.*, 1999, pp. 121–158) which involved pedagogues from early childhood education institutions meeting together in a network to discuss pedagogical documentation. A central idea was for them 'to deconstruct the dominant discourses in the early childhood field, to be able to reconstruct other discourses' (p. 127). The Stockholm project included tutoring on everyday practice, theoretical and practice-oriented lectures, and connections with others within the district.
- [2] All teachers and the senior teacher had a single employer.
- [3] Te Whāriki is New Zealand's first national early childhood curriculum.
- [4] Translation of some of these Maori words is difficult because there are no directly comparable English words to describe the concepts embodied in them. Approximately, 'whanau' means extended family, 'tamariki' means children, 'kaiako' is similar to the concept of pedagogue, educator or teacher. 'Mana' is hard to describe. It refers to a person's personal identity, power and influence.

- [5] Transcripts of teachers' statements are from a first interview at the beginning of the project, a final interview at the end of the project, one of the 11 network meetings or the special network meeting with Gunilla Dahlberg. The reference indicates the teacher who is quoted (where it is a single teacher talking), the interview or network meeting and the date.

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