In this issue:

Strengthening Aboriginal child development in central Australia through a universal preschool readiness program

Children’s literature as an invitation to science inquiry in early childhood education

The tensions between food choices and sustainable practices in early childhood centres

and more …
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Journal

2 Editorial
Lennie Barblett

4 ‘Better Beginnings has made me make reading part of our everyday routine’: Mothers’ perceptions of a family literacy program over four years*
Caroline Barratt-Pugh and Mary Rohl

13 Strengthening Aboriginal child development in central Australia through a universal preschool readiness program*
Bonita Moss, Helen Harper and Sven Silburn

21 Intergenerational collaborative drawing: A research method for researching with/about young children*
Linda Knight, Felicity McArdle, Jane Bone, Tamara Cumming, Liang Li, Corinna Peterken and Avis Ridgway

30 How far have we come in respecting young children in our research? A meta-analysis of reported early childhood research practice from 2009 to 2012
Fiona Mayne and Christine Howitt

39 The Professional Leadership and Action Research Training Model: Supporting early childhood leadership*
Elizabeth Stamopoulos

49 Children’s literature as an invitation to science inquiry in early childhood education*
Karen McLean, Mellita Jones and Clare Schaper

58 The tensions between food choices and sustainable practices in early childhood centres*
Wendy Boyd

66 The impact of free-choice motor activities on children’s balance control*
Ella Shoval, Tal Sharir, Ester Zaretzky and Boaz Shulruf

Online Annex

AJEC Vol. 40 No. 4 includes an Online Annex component. Access and further information can be found at:
www.earlychildhoodaustralia.org.au/ajec

77 The sleeping elephant in the room: Practices and policies regarding sleep/rest time in early childhood education and care
Sally Staton, Susan Irvine, Cassandra Pattinson, Simon Smith and Karen Thorpe

87 Grade repetition risk for boys in early schooling in Queensland, Australia
Robyn Anderson

96 Tolerance of food intolerance: A sociocultural study of parent perceptions on food, behaviour and learning in children aged between two and 14*
Dianne Golemac and Leanne Hallowell

104 What do early childhood teacher graduands say about working with infants and toddlers?: An exploratory investigation of perceptions*
Susanne Garvis and Donna Pendergast

112 Defining ‘meaningfulness’:
Enabling preschoolers to get the most out of parental involvement*
Qilong Zhang

* Denotes primary research articles
Each volume of our journal brings a rich tapestry of research investigations or commentaries and this volume is no different. In this issue of AJEC, every article brings something singular and readers will take away something special from their reading. For some, their focus will be on the framing theories or research methods, while for others it will be the research outcomes and how they can be used to influence policy or inform practice. It is a delight to bring this journal to you as it shows there is much to investigate, theorise, find, discuss and debate in early childhood.

Two research projects that have sought to look at responsive practices amongst a number of allied services are described in the next investigations. Barratt-Pugh and Rohl evaluate a family literacy program, Better Beginnings, which is a State Library of Western Australia initiative involving strong cooperation between the local government and child health professionals. The program was developed ‘to encourage parents to share books, songs and rhymes with their babies and young children’. Mothers from four diverse communities completed an annual survey over four years, with 10 of these participants interviewed. The researchers found that mothers were positive about the program, noted the ongoing nature of their book-sharing practices with their children and attributed changes to their family literacy to this program. Another investigation that supports the linking of services for children is the Moss, Harper and Silburn article on the examination of a transition-to-preschool program in Alice Springs after a two-year period. They found that where there is significant linking of services for Aboriginal children and their families that are locally relevant, such responsive support assists children in attending preschool programs. The authors suggest that this model should be widely shared to other Aboriginal primary health providers across Australia to assist in closing the gap in disadvantage.

New ways of conceptualising methodological tools are highlighted in the work of Knight and colleagues as they present their investigation focusing on the methodological effectiveness of intergenerational collaborative drawing. A team of eight researchers trialled this approach to drawing with young children, peers and tertiary students and in doing so came together as a ‘community of scholars’. The authors suggest that researchers need ‘responsive methodological tools to ask new questions and conduct rigorous, ethical research’. They also suggest ways in which this method might benefit research with young children.

Keeping children in the research frame, Mayne and Howitt use established data in their meta-analysis of 506 peer-reviewed articles from 10 international early childhood education journals from 2009 to 2012 (inclusive). They focused on child status with research, researcher perspective of children involved in research and respectful research culture within early childhood research. They found a large gap between rights-based early childhood research literature and the way in which research with young children is being reported. To that end they have developed a Rights-based Research Accountability Framework that will be of interest to all researchers who work/research with and for young children, alongside areas to be addressed to promote more inclusive approaches. In their article, Staton, Irvine, Pattinson, Smith and Thorpe also draw upon existing scholarship to explore the issues and tensions associated with sleep/rest in early childhood education and care services in the context of the National Quality Framework and more specifically, the National Quality Standard. They conclude that there is a need for more research, debate and discussion of ‘consultative solutions to ensure that sleep/rest practices best serve children, families and educators’.

Leadership, pedagogy and change management are high on the agenda in the current early childhood climate, and Stamopoulos reports on a study involving 17 teacher leaders and their journey across a year using a Professional Leadership and Action Research (PLAR) Training Model. Mixed methods were used to evaluate the model and describe the way that it was used to build pedagogical knowledge and leadership capacity of the teacher leaders. McLean, Jones and Schaper also use the experiences and understandings of a teacher in their study. They use an early childhood educator’s familiarity with children’s literature and play-based pedagogies to foster inquiry-based pedagogical approaches to science in early childhood. A sociocultural theoretical perspective frames the study as one teacher’s experiences and the meaning of those experiences are explored. The authors present a model for children’s literature as an invitation to science inquiry and find that science inquiry skills were evident in the open, modelled and purposeful play contexts provided.

Displaying the richness of the research tapestry, Anderson studies an existing large-scale data set on grade repetition focusing on students aged five to eight years. The methods of descriptive statistics and relative risk ratio were employed to assess the relative risk of grade repetition for boys. It was found that boys are over-represented in grade repetition in the year prior to school and in all early year levels of school. The factors that contribute to the disproportionate over-representation of boys are discussed, and recommendations for future policy and practice are suggested.
Boyd uses qualitative methods to investigate how educators implement policies that support health and wellbeing, and practice sustainability with regard to food. Directors, educators, parents and children are interviewed and a tension between centre policies and parents’ decisions and values regarding food was found. Golemac and Hallowell studied parents who have children with food intolerance and their perspectives of their children’s behaviour and learning when on a diet the children could tolerate. Through parent self-reporting, the authors found that parents perceived their children’s behaviour, learning and family relationships had improved. They also report that parents found it difficult to communicate food tolerance management to extended family and children’s care and education services.

Staying with the theme of physical wellbeing, Shoval, Sharir, Zaretzky and Shulruf present their investigation into the free-choice motor activities of kindergarten children and the impact on these skills. One hundred and fourteen children from three kindergartens in a district in Israel were tested (pre and post) and observed in indoor and outdoor environments. The authors found that children had better achievements where they had access to balance facilities both indoors and outdoors, and where children were able to freely choose social types of motor activities.

Garvis and Pendergast use an interpretivist paradigm to examine 25 pre-service teachers’ perceptions of working with infants and toddlers, with the results revealing that most perceived they only had a partial knowledge of children in this age group. The authors question the adequacy of pre-service teacher education courses preparing graduands for employment in working with children from birth to age three. With a different theoretical approach, Zhang uses grounded theory to drive the investigation of the meaningful involvement of parents in early childhood education. This study aimed to identify elements that constituted ‘meaningfulness’ of parent involvement, and through interviews found that there was interplay between the dynamic of involvement, the type of involvement activity and the impact of that involvement.

You will agree that the rich variety presented in this journal shows that researchers in the early childhood field around the globe are pushing the boundaries of our evidence base. They have probed, thought, framed, implemented, analysed, theorised, made models and recommended. Now the tapestry that is this journal lies ahead—what will you take away from your reading?

Lennie Barblett
Edith Cowan University
Introduction

From the beginning when I read to him I felt like a ‘dill’ reading to the baby, but as he has grown and responded I realised it really was worthwhile (Mother 159).

Research suggests that literacy begins at birth through the everyday social and cultural events that children are involved in (Barton & Hamilton, 2000). Thus, children’s developing understanding of what counts as literacy and how literacy is practised varies according to their social and cultural experiences in the family and community (Freebody et al., 1995; Heath, 1983). It has been shown that in some early childhood settings, particular literacy practices are privileged over others, potentially disadvantaging children who are not familiar with school-based literacy practices (Thomson, 2000).

In response to such findings, a number of family literacy programs have been developed in the United Kingdom (see Collins, Svensson & Mahony, 2005; Hannon, Morgan & Nutbrown, 2006; Moore & Wade, 2003), North America (see Anderson, Anderson, Friedrich & Kim, 2010) and Australia (see Barratt-Pugh & Rohl, 2008; Elias, Hay, Homel & Freiberg, 2006; Shoghi, Willersdorf, Braganza & McDonald, 2013). These programs aim to introduce families to strategies that support young children’s literacy in ways that potentially help bridge the gap between home and school. Many such programs are based on research that suggests early involvement in rhymes and language play (Bradley & Bryant, 1985), as well as shared book reading (Bus, van Ijzendoorn & Pellegrini 1995; Reese, Sparks & Leyva, 2010), has the potential to enhance children’s language and literacy outcomes in formal school contexts. These programs are also informed by research suggesting that parents who are not used to sharing books may need ongoing support in selecting appropriate books and in scaffolding interactions through meaningful talk (Bus, Leseman & Keultjes, 2000; Neuman, 1996).
There is an increasing body of empirical evidence that such family literacy programs do enhance young children’s literacy knowledge (Anderson, Hiebert, Scott & Wilkinson, 1985). Moreover, international research across 13 OECD countries showed that, regardless of family income, parent-reported in-home activities such as using words in context, telling stories, singing rhymes and songs and reading books with children by the time they were entering primary school, were significantly related to reading performance at age 15 (OECD, 2012). These findings suggest that promoting higher levels of parental involvement may increase students’ cognitive and non-cognitive outcomes, and may help reduce performance differences across socioeconomic groups (Borgonovi & Montt, 2012).

Surprisingly, given the importance of parent responses to, and involvement in family literacy programs, and that program outcomes for children appear to depend on parent engagement in the program, the views of parents who participate in family literacy programs have not usually been taken into account in program evaluation. Nevertheless, as reported by Hannon et al. (2006), the responses of participating parents are important for the evaluation and ongoing development of programs. This paper, therefore, explores the perceptions and practices of mothers who took part in a family literacy program in Western Australia over a period of four years.

Context
Better Beginnings is a family literacy program designed to encourage parents across Western Australia to share books, songs and nursery rhymes with their baby. It aims to:
- support parent involvement in their children’s early literacy learning
- introduce young children to developmentally appropriate books and literacy activities
- raise awareness of the value of reading to children from birth
- introduce families to libraries and community services that support literacy development.

The program was developed by the State Library of Western Australia and is based on strong cooperation between health professionals, local governments and public libraries (see Barratt-Pugh, Anderson & North, 2013). Key elements of the program over the four-year period of this study included:
1. A ‘reading pack’ prepared by library staff, usually given to parents of young babies by the community child health nurse at the six–eight week health check, although in a few communities it is given out by librarians. The contents of the reading pack may vary somewhat, but normally would include:
   - a board book for babies
   - a frieze with nursery rhymes printed on it
   - a brochure containing suggestions for enjoying reading experiences with a baby
   - a list of suggested first books for babies and toddlers
   - information about local library resources
   - a library membership form
   - a DVD showing adults reading and singing rhymes and songs to young children and babies, and information about the value of these activities.

2. Baby Rhyme Time and Story Time sessions at the library, designed to provide enjoyable shared early literacy experiences for parents and young children.
3. Family Resource Centres in libraries providing interactive early childhood learning spaces, in addition to resources designed to increase parental knowledge of early childhood language and literacy.
4. A Reading Gateway on the website of the State Library of Western Australia that includes information about Better Beginnings and other resources for parents and children (www.better-beginnings.com.au).

Methodology
In order to evaluate the impact of Better Beginnings, a formative experimental design was used that included both qualitative and quantitative methods (Reinking & Watkins, 2000). The evaluation sought the perspectives of key professionals involved in the program, namely, community health nurses working in child health clinics, community librarians, personnel from the State Library of Western Australia and the mothers of new babies. It included documentation of the nature and outcomes of the program from these participants’ perspectives, over four years. A sample of mothers from four diverse communities was surveyed annually and a sub-sample of 10 mothers in each community, based on socioeconomic status, level of education and ethnicity, participated in detailed interviews about the Better Beginnings program. This paper reports some of the findings from the parent survey data.

Survey participants
Mothers of new babies from the four communities (two metropolitan, one rural and one remote) and from varying social and economic backgrounds, who received the Better Beginnings reading pack, were surveyed annually over a period of four years. The total number of mothers who responded to each of the four surveys was as follows: Year 1, 300; Year 2, 177; Year 3, 102; Year 4, 84. It can be seen that the highest degree of attrition was from Year 1 to Year 2. This is not surprising given that the group of mothers who took part in the pre-program survey were all...
those who, with their baby, attended the six–eight week check with the community child health nurse and agreed to take part in the survey at this time.

Almost one-quarter (23 per cent) listed a country other than Australia as their country of origin and four per cent identified their baby as Aboriginal or Torres Strait Islander. Nine per cent reported that English was not the main language spoken at home and 17 per cent that their baby was regularly spoken to in a language other than English. In terms of highest educational levels achieved, the mothers reported a wide range for both themselves and the babies’ fathers/co-carers. Sixteen per cent of mothers and 20 per cent of fathers reported completing Year 10 or below; 60 per cent of mothers and 61 per cent of fathers reported completing Years 11, 12 or TAFE; 23 per cent of mothers and 16 per cent of fathers reported completing a university degree. There was no response for one per cent of mothers and three per cent of fathers.

The first survey (Year 1: pre-program) was presented by a research assistant to the adult who brought the baby to the six–eight week health check-up at their local child health clinic, all of whom identified as the baby’s mother. Consequently, all survey participants were mothers. The following three surveys (Years 2, 3 and 4) were conducted by telephone. Each survey included a space for ‘comments’ where appropriate, to give further insight into particular aspects of the program. The content of the surveys is outlined below:

- The first survey (Year 1: pre-program) asked about demographics, library membership and use, attitudes to and confidence in sharing books, songs and nursery rhymes with their baby, as well as their early literacy practices with their baby.
- The second survey (Year 2) asked about program delivery and content, library membership and use, and the influence of the program on early literacy attitudes, beliefs and practices, with specific reference to sharing books, songs and nursery rhymes with their baby.
- The third and fourth surveys (Years 3 and 4) addressed the same areas as in previous surveys, but also addressed the sustainability and continuing influence of the Better Beginnings program.

Findings

Sharing books with the new baby and becoming more confident

Just before they received the reading pack and became involved in the program, 14 per cent of mothers reported in the pre-program survey that they had already shared books with their baby. One year later, 85 per cent reported sharing books with their baby and, when asked if their levels of confidence in reading to their baby had changed, almost two-thirds (62 per cent) reported an increase in their confidence over the previous year. Further, from Years 2 to 3, the proportion of those who indicated their confidence had increased was just over one-third and, by Year 4, 81 per cent of mothers indicated that Better Beginnings had influenced their confidence in sharing books with children. Even those who had initially reported feeling confident indicated that the Better Beginnings program had reinforced and further increased their confidence.

Better Beginnings gave me confidence. I know reading is an everyday tool and teaching my children will help them be more successful in life (Mother 29).

The mothers’ views of the importance of sharing books with their children also increased over the four years, so that in Years 2, 3 and 4, all saw it as important, with most seeing it as ‘very important’ (see Table 1). Further, over half of the participants in Year 2 (54 per cent) and nearly all of the participants in Year 4 (96 per cent) attributed their views about the importance of reading to their child to Better Beginnings.

Table 1. Perceptions of the importance of book sharing

<table>
<thead>
<tr>
<th>Level of importance</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very important</td>
<td>76%</td>
<td>96%</td>
<td>98%</td>
<td>98%</td>
</tr>
<tr>
<td>Fairly important</td>
<td>18%</td>
<td>4%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Not important</td>
<td>6%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

The mothers’ open-ended comments indicated that Better Beginnings had changed their perceptions, understandings and practices:

It really changed me. I now make sure I read to all my kids before they go to bed and when they bring me books (Mother 71).

It is noted that, even though 94 per cent indicated that they thought sharing books was ‘fairly important’ or ‘very important’ before receiving the Better Beginnings reading pack, only 14 per cent reported actually sharing books with their new baby. Many commented that they thought their baby was ‘too young’ or they were ‘not sure’ how to share a book, or which types of books to share.

When asked about the resources in the reading pack, in the first post-program survey (Year 2), the majority of mothers (93 per cent) reported that they had read the book to their child from between one and 99 times, the average being 26 times. In addition, the vast majority also indicated that they (94 per cent) and their child (93 per cent) ‘liked’ the gift book. Around two-thirds reported that the parent information pamphlet about how to share books with a baby (68 per cent), and the book suggestions pamphlet (65 per cent), were either ‘quite useful’ or ‘extremely useful’.

The Better Beginnings pack was definitely a good starting point. It taught me how to read to him (Mother 98).
In addition to reading the Better Beginnings gift book, almost one-third (29 per cent) reported that they read other books recommended in the Better Beginnings pamphlet, acquiring these books from the library and a range of other sources, including bookshops, supermarkets and friends.

[The book ideas pamphlet] made me look more at picture books and board books … Also flip-books, I didn’t think to look at these before, but Dear Zoo is definitely one of his favourites (Mother 4).

Reading practices with the child

The mothers were asked about how Better Beginnings had influenced specific aspects of their literacy practices, in terms of how these practices might have changed over the previous year. It can be seen in Table 2 that the mothers indicated some marked changes in these practices over time that most likely reflected the children’s early literacy development and possibly their parents’ increasing knowledge of early literacy. These changes were evident in all years of the research project. By the fourth survey, when the children were three to four years old, around three-quarters of mothers reported some changes during the past year in the frequency of reading to their child. Almost all reported changes were in: communication between parent and child; the frequency of the child asking for a book to be read; other people reading to their child; and for those who had other children, frequency of reading to these children. Ninety per cent of mothers indicated that these changes in language and literacy practices had been influenced by Better Beginnings.

I would never have even thought of reading to my baby until I got Better Beginnings. I never read to my first two until I got the pack (Mother 62).

Other data concerning the frequency of parents reading with their child shows a high incidence of mothers reading to their child six or seven days a week in the second year of the project, and this was sustained and extended in the fourth. Many fathers also read to their child, albeit on a less regular basis (see Table 3).

Table 2. Changes in reading practices over the previous year

<table>
<thead>
<tr>
<th>Reading practice</th>
<th>Not at all</th>
<th>A little</th>
<th>Quite a bit</th>
<th>A great deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often parent reads to child</td>
<td>Yr 2 30%</td>
<td>Yr 4 26%</td>
<td>Yr 2 19%</td>
<td>Yr 4 30%</td>
</tr>
<tr>
<td>How often child asks for a book to be read</td>
<td>Yr 2 48%</td>
<td>Yr 4 7%</td>
<td>Yr 2 23%</td>
<td>Yr 4 25%</td>
</tr>
<tr>
<td>How parent communicates with child (reads more, talks more, watches less TV)</td>
<td>Yr 2 29%</td>
<td>Yr 4 6%</td>
<td>Yr 2 21%</td>
<td>Yr 4 24%</td>
</tr>
<tr>
<td>How often other people read with child</td>
<td>Yr 2 39%</td>
<td>Yr 4 15%</td>
<td>Yr 2 23%</td>
<td>Yr 4 23%</td>
</tr>
<tr>
<td>How often parent reads with their other children*</td>
<td>Yr 2 12%</td>
<td>Yr 4 12%</td>
<td>Yr 2 12%</td>
<td>Yr 4 18%</td>
</tr>
</tbody>
</table>

*Not all families had more than one child.

In addition to reading the Better Beginnings gift book, almost one-third (29 per cent) reported that they read other books recommended in the Better Beginnings pamphlet, acquiring these books from the library and a range of other sources, including bookshops, supermarkets and friends.

Table 3. Frequency of parent reading with their child

<table>
<thead>
<tr>
<th>Parent</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother reads to child six or seven days per week</td>
<td>72%</td>
<td>80%</td>
<td>83%</td>
</tr>
<tr>
<td>Father reads to child two or more days per week</td>
<td>66%</td>
<td>72%</td>
<td>72%</td>
</tr>
</tbody>
</table>

It [Better Beginnings] has encouraged me to persevere and continue bringing books into Kieran’s life. It is hard with his disability but I believe the books helped with his speech development (Mother 16).

Mothers reported a range of other people reading to their child on a regular basis, including the child’s siblings, grandparents, babysitter or childcare worker and other significant adults. By the fourth year of the study, almost two-thirds (60 per cent) indicated that Better Beginnings had influenced, to some extent, the other people who read to their child.

IT [Better Beginnings] encouraged me to keep reading and keep up the routine. This keeps up father/son time as he is the one who does the bedtime routine and they always share a book (Mother 53).

The mothers also reported on some early literacy practices with family members that their child had taken part in during the previous week (see Table 4). In the second and fourth years, during the previous week, nearly all children had reportedly shared a book with a family member who had talked about the book with them. Many family members had ‘told a story’ and almost one-quarter had used a language other than English when reading to the child.

Table 4. Literacy practices the child had engaged in with a family member during the previous week

<table>
<thead>
<tr>
<th>Literacy practice</th>
<th>Year 2</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared a book with the child</td>
<td>94%</td>
<td>99%</td>
</tr>
<tr>
<td>Talked about the story or pictures with the child</td>
<td>89%</td>
<td>95%</td>
</tr>
<tr>
<td>Told a story, not from a book, with the child</td>
<td>60%</td>
<td>70%</td>
</tr>
<tr>
<td>Used a language other than English when reading to the child</td>
<td>24%</td>
<td>23%</td>
</tr>
</tbody>
</table>
The mothers were asked for details of book-sharing practices with their child over the previous year (see Table 5). In the second survey, most mothers reported that they frequently chose an appropriate book, place and time for reading, as well as a position for holding the book—in addition to pointing to the pictures and naming them, reading with expression and re-reading favourite stories. Many reported using a wide repertoire of practices that included moving their finger under the words as they read, choosing stories with rhyme and repetition, asking questions about the pictures and encouraging prediction about what might happen next. Most of these practices were outlined in the brochure contained in the reading pack. By the fourth year, most mothers reported using all of these practices to some extent and many talked about the words in the book with their child.

[Sharing books is about] quality time, concentration and attention span, listening to the story, asking, ‘Why?’ … [and] looking at the pictures and words (Mother 80).

The children’s reported literacy attitudes and behaviours

Not only did the mothers indicate that their ideas and literacy practices changed during the research project, but they also reported that their child’s interest in books, the amount of a book they enjoyed being read aloud and other book-related behaviours also changed as they grew older, reflecting their increased levels of development. While nearly all children were said to have shown some early interest in books, by the third and fourth years of the study nearly all were showing great interest (see Table 6).

<table>
<thead>
<tr>
<th>Book-sharing practice</th>
<th>Frequently</th>
<th>Occasionally</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choosing a comfortable place and the right time to share a book</td>
<td>77% Yr 2</td>
<td>91% Yr 4</td>
<td>19% Yr 2</td>
</tr>
<tr>
<td>Holding the book within the child’s visual range and turning pages slowly</td>
<td>87% Yr 2</td>
<td>92% Yr 4</td>
<td>10% Yr 2</td>
</tr>
<tr>
<td>Letting their child hold and play with board books</td>
<td>94% Yr 2</td>
<td>95% Yr 4</td>
<td>3% Yr 2</td>
</tr>
<tr>
<td>Choosing books with bright pictures and a small amount of print</td>
<td>82% Yr 2</td>
<td>97% Yr 4</td>
<td>15% Yr 2</td>
</tr>
<tr>
<td>Moving their finger under the words, from left to right, as they read</td>
<td>48% Yr 2</td>
<td>56% Yr 4</td>
<td>19% Yr 2</td>
</tr>
<tr>
<td>Reading stories aloud with expression</td>
<td>86% Yr 2</td>
<td>94% Yr 4</td>
<td>11% Yr 2</td>
</tr>
<tr>
<td>Choosing stories with a lot of rhyme and repetition</td>
<td>53% Yr 2</td>
<td>60% Yr 4</td>
<td>36% Yr 2</td>
</tr>
<tr>
<td>While reading to their child, pointing to pictures and naming or describing them</td>
<td>83% Yr 2</td>
<td>79% Yr 4</td>
<td>12% Yr 2</td>
</tr>
<tr>
<td>While reading to their child, asking questions about the pictures</td>
<td>35% Yr 2</td>
<td>61% Yr 4</td>
<td>24% Yr 2</td>
</tr>
<tr>
<td>Encouraging their child to predict what will happen next in the story</td>
<td>16% Yr 2</td>
<td>46% Yr 4</td>
<td>19% Yr 2</td>
</tr>
<tr>
<td>Reading and re-reading favourite stories</td>
<td>87% Yr 2</td>
<td>97% Yr 4</td>
<td>8% Yr 2</td>
</tr>
<tr>
<td>Talking about the words in the books</td>
<td>N/A</td>
<td>45% Yr 2</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Table 5. Frequency of specific book-sharing practices over the previous year

The children’s increasing levels of interest, and most likely their increased levels of development, were reflected in the proportion of a book they enjoyed hearing read aloud, which by the fourth survey was overwhelmingly reported as a whole book, rather than just a part (see Table 7).

<table>
<thead>
<tr>
<th>Level of interest</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child very interested</td>
<td>74%</td>
<td>91%</td>
<td>88%</td>
</tr>
<tr>
<td>Child quite interested</td>
<td>20%</td>
<td>9%</td>
<td>11%</td>
</tr>
<tr>
<td>Child not very interested</td>
<td>6%</td>
<td>0%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Table 6. Child’s reported level of interest in books

Over the four years of the research project, most mothers reported that their children had been developing early literacy behaviours that would be very helpful for learning to read and write. Most of these reading behaviours are closely related to those outlined in the Better Beginnings brochure and to those that the mothers reported modelling for their children (see Table 8).

My older toddler now ‘reads’ Babyways [Better Beginnings gift book] to her younger brother. He repeats words … looks and points to pictures. If it’s a story he knows well, he’ll pre-empt the story (Mother 42).
In addition to the reported findings about the mothers’ and children’s behaviours around books were findings about library membership and practices for both mothers and children. Library membership grew dramatically during the study; by the fourth year, reported membership was 65 per cent for children and 85 per cent for mothers, with many mothers indicating that they and their children visited the library on a regular basis and borrowed children’s books.

It encouraged me to go to the library and keep reading to my child (Mother 34).

**Mothers’ suggestions for modifications and extensions to Better Beginnings**

In each survey, apart from the first which was pre-program, participants were asked for any suggestions for improvements to the Better Beginnings program and for any other general comments. Each year the mothers made a number of mostly positive comments about the value of the reading pack, especially the ‘gift’ book and the information about sharing books, in addition to their increased confidence and understanding of the importance of reading to a new baby. Those mothers who visited the library also talked about the support they had gained from designated Better Beginnings library spaces and activities. Nevertheless, a key issue emerged in the second survey that was reinforced in the two following surveys.

This key issue was an ongoing request for more information about how to share books with a baby and, as the baby matured into a toddler, this included reference to sharing books in languages other than English and how to share books in order to prepare children for school. Some mothers commented on how the program had helped them and/or their partner to talk about the pictures, as they had ‘low literacy’, were ‘non-readers’, or did not read English and needed more support to continue. Others noted the importance of updating information and ongoing contact with the service providers.

The free book and demonstration of book-sharing strategies by many of the community child health nurses when distributing the reading pack to new mothers were seen as a starting point for shared reading, and the library was seen as an important resource for information and support. However, there were many requests for an increase in the number of activities offered by the library and additional books as the children matured.

I really want more information about what to do now she’s older, like sounding out letters and introducing the alphabet, how to teach to her to read [and] getting ready for school (Mother 11).

**Discussion and conclusions**

This paper is based on the rigorous collection and analysis of a large data set; however, the following potential limitations of the data collection must be taken into account when considering the discussion and conclusions. First, the proportion of the Year 1 survey participants, who were available to take part in subsequent surveys and interviews, decreased over the study to 28 per cent by Year 4, despite many efforts by the research team to contact them. Given the highly transient nature of young families, particularly in the four communities that were studied in the large mining state of Western Australia, this was not unexpected, but may limit generalisation of the findings to other populations. It is possible that the mothers who remained in the study perceived reading to their child visiting the library as more enjoyable and more important than those mothers who withdrew. A second limitation concerns the interpretation of the mothers’ and children’s literacy practices as these were reported by the mothers and not directly observed by the researchers. Some limitations of parent self-report in the evaluation of family literacy programs have been identified in a recent report (Sheffield Hallam University, 2014), particularly when the researchers are involved in the program. In the Better Beginnings study, however, the researchers who interviewed the mothers by telephone were not involved in the implementation of the program.

Introducing the Better Beginnings program at the six–eight week health check is based on increasing evidence that, during the first three years of development, a large number of connections are formed in the brain. Interactions with the primary caregiver and other adults through a variety of activities have a crucial impact on the formation of these connections, which influence the development of language and literacy, as well as social and emotional wellbeing (Gopnik, Meltzoff & Kuhl, 1999; McCain, Mustard & Shanker, 2007). Thus, introducing Better Beginnings during a critical period of development is seen as maximising its potential for success.

When surveyed one year after receiving the reading pack, most mothers reported sharing books with their baby; some had reported sharing books even before receiving it. This suggests that mothers began sharing books when their baby was quite young, which may have acted as a

<table>
<thead>
<tr>
<th>Early literacy behaviour</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has a favourite book</td>
<td>N/A</td>
<td>86%</td>
<td>87%</td>
</tr>
<tr>
<td>Points to pictures</td>
<td>83%</td>
<td>100%</td>
<td>99%</td>
</tr>
<tr>
<td>Turns pages</td>
<td>92%</td>
<td>99%</td>
<td>96%</td>
</tr>
<tr>
<td>Talks about pictures</td>
<td>64%</td>
<td>93%</td>
<td>96%</td>
</tr>
<tr>
<td>Joins in reading</td>
<td>61%</td>
<td>82%</td>
<td>85%</td>
</tr>
<tr>
<td>Asks questions about the story</td>
<td>24%</td>
<td>46%</td>
<td>73%</td>
</tr>
<tr>
<td>Pretends to read</td>
<td>74%</td>
<td>94%</td>
<td>95%</td>
</tr>
<tr>
<td>Says what will happen next</td>
<td>N/A</td>
<td>40%</td>
<td>79%</td>
</tr>
<tr>
<td>Points to the words</td>
<td>31%</td>
<td>48%</td>
<td>45%</td>
</tr>
</tbody>
</table>
catalyst for the development of several aspects of literacy. These included changes in mothers’ confidence in, and beliefs about sharing books, an increase in shared reading practices across the family, and development of their child’s book-related behaviours.

Shared book reading has been identified as an important factor in early language and literacy development; indeed the US National Research Council stated that ‘the single most important activity in building the knowledge required for eventual success in reading is reading aloud to children’ (Anderson et al., 1985, p. 23). Nevertheless, more recent research suggests that exposure to books in itself may not be enough to support early literacy (Anderson et al., 2010). Rather, there is a complex interplay between several aspects of book sharing that have the potential to lead to effective outcomes. These include the nature of interactions between the adult and child when sharing books, the frequency of book sharing and the selection of books (Bus et al., 2000; Elias et al., 2006; Neuman, 1996; Seden, 2008).

The book-sharing practices described in the Better Beginnings pamphlet and demonstrated on the DVD illustrate ways of actively engaging babies and toddlers in shared reading. These practices are similar to those contained in the ‘dialogic reading’ model, which has been shown to help develop children’s emergent literacy skills and their language and metalinguistic skills (Reese et al., 2010).

Dialogic reading is a method of reading picture books with young children, in which parents/caregivers are shown how to encourage the child to actively participate in the reading of a book (Zevenbergen & Whitehurst, 2003), with the aim of the child eventually taking over the role of narrator. Adults support the child’s learning of story vocabulary and discussion of the plot through various questioning and explanatory techniques. Attention to text through shared, sustained thinking as parents/caregivers and the child jointly explore and extend concepts is a powerful means of supporting early language and literacy (Siraj-Blatchford, 2007). This model highlights the importance of dialogue during the reading, as parents scaffold, elicit and respond to comments from the child about the pictures or text and adapt the discussion to the child’s level of understanding (Bus et al., 1995; Mol, Bus & de Jong, 2009). Many of the mothers in our study reported using dialogic reading strategies, which Morgan and Goldstein (2004) found help caregivers facilitate both involvement in children’s reading development and confidence in book sharing. The mothers in our study talked about gaining confidence and the strengthening of emotional ties between them and their child through physical closeness and bonding as they shared books.

A body of research has identified links between parental beliefs about literacy and parental actions, suggesting that beliefs shape the home literacy environment that parents create, and the practices they engage in (Baker & Scher, 2002; Weigel, Martin & Bennett, 2006). Although Weigel et al. (2006) found that mothers believed early literacy was important and that they could make a difference to their child’s literacy development, it was the degree to which certain beliefs were endorsed that appeared to make a difference. Results from our study suggest that Better Beginnings helped to reinforce and extend the mothers’ beliefs about the importance of sharing books and an appropriate age at which to start sharing books, thus boosting their beliefs. This appears to be particularly important for those mothers who reported feeling ‘stupid’ and/or ‘unsure’ about shared reading before receiving the reading pack.

Recently the selection of books for babies and toddlers has been identified as important, with the narrative genre particularly lending itself to complex talk around books (Nyhout & O’Neill, 2013). Research suggests that in order to maximise engagement in shared reading, the book must attract the child’s attention. There is also evidence that less text leads to higher levels of parent–child dialogue and is particularly useful for parents who speak English as an additional language or have low literacy skills (Elias et al., 2006). Further, predictable books and alphabet books have been found to assist later reading achievement (Stahl, 2003). Several mothers in our study indicated that they had been unsure about which books to select or where to get them and had found the information pamphlet about book selection and availability very useful in helping them make informed choices.

Several studies have found the frequency of shared reading to be an important determinant of children’s later literacy attainment (Elias et al., 2006). The data from our study indicate that mothers increased the frequency of book sharing as the child matured, which appeared to have resulted in a ripple effect for some families in that other family members either commenced or increased book-sharing activities. Further, in some families, mothers reported sharing books with subsequent babies.

Ultimately, the mothers’ engagement in book sharing appeared to result in an increase in their baby’s interest in and enjoyment of books, and the development of book-sharing practices as their child matured. As babies and toddlers, many had learnt about having a favourite book, pointing to the pictures and talking about them, turning the pages, joining in the reading and pretending to read. By the fourth year of the study, the majority were asking questions about the story being read and hypothesising about what would happen next, while nearly half were pointing to the words during a book reading, thus developing concepts about print.

In conclusion, the mothers’ responses suggest that the literacy practices supported by Better Beginnings continued to be implemented and modified or extended across the four years of the study, impacting on the children’s literacy learning and family literacy practices. Thus it appears
that for the majority of mothers, **Better Beginnings** was successful in achieving its first three aims: to support parent involvement in early literacy; to introduce young children to developmentally appropriate books and literacy activities; and to raise awareness of the value of reading to children from birth. Many families reported joining the library and also borrowing books, a practice that has been shown to be related to literacy achievement (Melhuish et al., 2008). What is less clear is the degree to which families accessed and used other community services that support literacy development—the fourth aim of **Better Beginnings**.

The challenge for **Better Beginnings**, as identified by the mothers in our study, is how to sustain and extend the program over time as children mature. On the basis of this finding, we recommended explicitly linking with other community services and partnering with specific early years service providers for children in order to extend the program and support the fourth aim of **Better Beginnings**. As a result, **Better Beginnings** has partnered with the Western Australian government, and independent and Catholic school systems to introduce the **Better Beginnings Four-to-Five Years** program for Western Australian children in pre-primary (the first compulsory year of school) and kindergarten (the year prior to pre-primary).

Further research is needed to examine the sustainability of the **Better Beginnings** program and how it may be adapted and extended to meet the needs of individual communities, with particular reference to the involvement of child health clinics as the source of delivery of the reading pack and libraries as ‘literacy hubs’. Additionally, given the results of several recent large-scale international research projects (OECD, 2012; Robinson & Harris, 2014) that show a relationship between parental reading with their young children and academic achievement in the later school years, it will be important to closely monitor how involvement in the program may impact on children’s cognitive development over time.

### References


Strengthening Aboriginal child development in central Australia through a universal preschool readiness program

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Helen Harper
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THIS PAPER EXAMINES A recent example of a transition-to-preschool program in regional Australia. The program is significant in linking Aboriginal child health and early childhood learning services. The discussion is drawn from a mixed method evaluation undertaken at the end of the program’s first two years of funding. Evaluation findings suggest that many barriers to participation in early childhood learning programs for Aboriginal children can be reduced with responsive support. The study points to the need for funding for innovations to be seen as an essential investment, not an unwanted cost.

Introduction

Recent international research creates a convincing case for the power of early childhood programs to support young children who are living in challenging or adverse circumstances. Through preschool programs, for example, children can experience stimulating learning environments that enhance their overall development and build supportive relationships outside the home (COAG, 2009; Harrison, Goldfeld, Metcalfe & Moore, 2012; Sims, 2011). Such programs can also help children build their confidence in learning and establish a strong foundation for subsequent learning (Dowling & O’Malley, 2009; Sammons, 2010; Siraj-Blatchford & Clark, 2000). Research also shows that these kinds of early intervention can have a positive impact beyond childhood and across the whole lifespan (AMA, 2013; Center on the Developing Child at Harvard University, 2010; Silburn, Robinson, Arney, Johnstone & McGuinness, 2011).

In the Australian context, Aboriginal children are one group for whom the benefits of early childhood programs can be substantial. There are many complex factors that contribute to significant increased risk of developmental delays and disability for Aboriginal children. These include lower birth weight, growing up in families living in relative poverty and experiencing multiple stressors (Silburn et al., 2011). Children growing up with these disadvantaged challenges tend to start school behind their peers and fall further behind over time (Moore & McDonald, 2013). They have a better chance to thrive where they have access to effective and responsive early childhood programs, including early learning programs (Baxter & Hand, 2013; Harrison et al., 2012; Sims, 2011; Ware, 2012).

However, despite a growing literature supporting early intervention and the proliferation of both health- and education-based interventions, we have few evidence-based service models that are shown to be effective in addressing the range of health and educational needs of young Aboriginal children. In the Northern Territory in particular, many Aboriginal children still do not have access to an adequate range of support services (Silburn et al., 2011). While the literature has broadly highlighted the significance of integration (Moore, 2007; Wise 2013), there has, until now, been no systematic research about the kinds of collaboration between services that best target the needs of Aboriginal children and how to intervene directly to improve access (Ware, 2012).

This paper examines a recent example of a program that links health and early education. The Preschool Readiness Program (PRP) was designed to tackle the barriers to preschool attendance that impact on Aboriginal children and has been operating in the central Australian town of Alice Springs since 2009. Using material drawn
from a small-scale evaluation of the program undertaken during 2012, we examine the nature of the careful and sensitive work carried out by the PRP team to build a comprehensive place-based intervention, and the types of partnerships they have created to begin connecting disparate organisations in order to effectively link health and education services.

We begin with a brief presentation of the specific context of Alice Springs, describing the needs and interrogating the assumptions that underpinned the PRP intervention. We describe the various components of the intervention and how each was integrated with others. Finally we discuss the contribution of the PRP to the way we now understand the levels of sustained support needed to improve children’s wellbeing and access to early childhood education for urban Aboriginal families in Alice Springs.

Alice Springs context

Alice Springs is the largest town and service centre in central Australia. Aboriginal people make up a significant proportion of the town’s demographic, at around 20 per cent of the total population of 28 400 (Yuhun, Taylor & Winter, 2012). The Aboriginal population is socioeconomically highly diverse: Aboriginal families are spread throughout suburban housing, but are also concentrated in more than 20 ‘town camps’, or small quasi-permanent settlements on the town periphery. While families and people from the same language group tend to cluster together, the Alice Springs town camps are home to people from a mix of language and cultural groups, including Arrernte, Warlpiri and Luritja (Foster, Mitchell, Ulrik & Williams, 2005). Traditional languages and cultures remain vibrant; nonetheless the town camps are also characterised by crowded housing and high levels of social dysfunction, measured, for example, by alcohol consumption levels, police intervention data and health status (Australian Government, 2011). These factors in turn challenge the general wellbeing of families living in the town camps and many children are confronted with conditions that make it less likely they will thrive.

In 2009 a collaboration between the Australian and Northern Territory Governments produced the Alice Springs Transformation Plan (ASTP) (September 2010–February 2013), as part of the ‘Closing the Gap’ initiative (Australian Government, 2009a). One strategy in this plan, ‘Early Childhood Action’, was designed to provide more support for vulnerable children and contribute to intergenerational transformation over the longer term. The situation in Alice Springs was consistent with other Australian research which has found that Aboriginal children frequently miss out on access to early childhood programs (Baxter & Hand, 2013; Biddle, 2007; CEIEC, 2008; Dowling & O’Malley, 2009) and that there has been a paucity of early childhood programs attracting Aboriginal families (Cragg, 2004). All children are entitled to attend preschool, which is funded by the Northern Territory Government. Preschools are physically located in and administered by schools, with free programs run for up to 15 hours a week. However, other than preschool, at the time of the research there were very few services catering specifically for three- and four-year-olds. Moreover, there was a widespread perception that significant numbers of Aboriginal children did not access services and, of those who actually enrolled in preschool, many disengaged quickly once the school year started (Cragg, 2004).

The Early Childhood Action Group, composed of representatives from both government and non-government organisations, identified the need for a strategy to help Aboriginal children from the town camps participate in early educational services. They recommended that ASTP provide funding towards the design, delivery and evaluation of a local intervention targeting children the year before they are eligible to enroll in preschool. The PRP was developed with specific goals to improve preschool readiness and increase the level of preschool enrolment and participation of Alice Springs Aboriginal children. The program was designed as an “ecological” approach, constructing children’s transition to preschool as a process experienced simultaneously by people and by institutions and involving interactions among the children, their families and communities, teaching staff, health staff and policy staff (Dockett, Perry & Kearney, 2010). It was administered by the Central Australian Aboriginal Congress (Congress)—a primary health care provider that has operated in Alice Springs since 1973 and which also offers an antenatal and birthing service, a long day care centre, child health outreach and both intensive and targeted family support programs.

The Preschool Readiness Program model

The PRP used a mix of strategies including family liaison, health checks and supporting children to get the most possible out of preschool. From the outset, Congress did not advocate development of any additional services to mainstream preschool programs. Rather, they endorsed local preschools as ideal environments for young Aboriginal children, including those with developmental concerns (Cragg, 2004). The PRP was staffed by a small team of people: a manager/psychologist (who also designed the PRP model), an early years educator, a child health nurse and an Aboriginal family support worker whose role was liaison but also involved helping other team members understand Aboriginal protocols, linguistic conventions and living conditions. The model comprised a number of components, focusing on: (i) finding and connecting with families; (ii) health checks, developmental assessments and intervention work to determine and address child needs; (iii) preschool enrolment and adjustment support; (iv) intensive pre-preschool intervention; and (v) partnerships between health and education providers to enhance the child’s wellbeing and participation in preschool.
Finding and connecting with families

Significant energy was initially invested in identifying families who were missing out on services that could help their children start preschool successfully. As a large health care provider, the Congress clinic had contact with most Aboriginal families in the town. The established client record system was used as the starting point to find and connect with families with three- and four-year-old children. All families were visited, asked if they would be enrolling children in preschool, then offered child health checks and other additional supports if needed. Between January 2011 and June 2012, PRP staff visited more than 400 families. PRP staff found that a large proportion of families knew about preschool and needed moderate or no assistance to get their children enrolled and attending. However, because many Aboriginal families are transient in the Alice Springs town and region, staff often needed multiple visits to households before making contact with families. The process was nonetheless useful in allowing staff to build town-wide connections and to gain better knowledge of the preschool cohort.

During the visits, staff used a program specific ‘Preschool and Family Readiness Checklist’ to inform their thinking about the kind of support families would need. The checklist specifically addressed parental expectations about children starting preschool and helped staff to identify any barriers to children enrolling in preschool. The checklist also prompted staff to ask about children’s disposition and physical attributes, their language skills, how they dealt with new experiences, any particular perceived strengths or developmental issues, prior experience with child care and issues related to family functioning. Staff talked to parents about preschool, the enrolment process and the importance of a good preschool experience. They gave practical help in filling out forms and organised familiarisation visits to the preschools.

Staff also worked with local Indigenous broadcaster Imparja to set up an information campaign, dubbed ‘Amazing Start to School’. This involved a community service announcement to inform parents about preschool enrolment. The announcement included local Aboriginal families talking about their child’s positive experience with preschool.

Ready children: Health checks and developmental assessments

As the second core component of the PRP, children received free comprehensive health checks at age three and again at age four. These measured height, weight and hemoglobin (to monitor children’s growth and nutritional status). They included checks of oral, ear and nose health and developmental screening. PRP staff used the information gained from the checks to make early referrals and for managing serious or chronic conditions. This was predicated on the understanding that health checks provide surveillance that will buffer children against poor health (CARPA, 2014). Further, if children’s health needs are not met they cannot engage effectively with education, as physical, social, emotional and cognitive development are all intertwined with learning (Dockett et al., 2010; Eades & Stanley, 2013). Much current transition support is focused on engagement, but it is also essential to consider the need for comprehensive interventions to address complex developmental vulnerabilities (AMA, 2013; Eades & Stanley, 2013; Ware, 2012). The employment of a psychologist in the PRP team meant that early developmental screening was available to families who would usually not access psychological services. Screening was used to identify children who could benefit from either referral to early intervention services or inclusion in the PRP intensive pre-preschool component. PRP staff administered the assessments in either English or a local Aboriginal language with parents present. This prompted discussions between staff and parents about children’s knowledge, English language proficiency and general development. Throughout the checks, parents were able to discuss any developmental concerns with the team.

The PRP thus served to create a rich database about children’s health. The number of children receiving comprehensive health checks increased from a very low base (from three before the program to 267) and confirmed that, in comparison to their non-Aboriginal peers, poor health is an important factor contributing to Aboriginal children’s current and longer term developmental vulnerability. For example, 50 per cent had dental cavities, 29 per cent had hearing issues, 30 per cent had skin issues and seven per cent had iron deficiency. One-third of the children in the PRP (34 per cent) had multiple health concerns. PRP staff emphasised that systematic health check data provided an important new focus for Congress to respond to.

Preschool enrolment and adjustment support

Once children were enrolled in preschool, PRP staff spent time with children and families at the preschool, to help the children adjust to the new place and to address any apprehensions or anxieties on the part of either parent or child. The PRP staff described this work as ‘engaging and sustaining’ participation.

The PRP also worked to disentangle and respond to the more complex barriers experienced by some Aboriginal children attending preschool. A minority (about 20 per cent) of families had high or multiple support needs. As well as children’s developmental concerns, some families also struggled with multiple problems compromising family functioning, including poor physical health, mental illness, alcohol abuse or family conflict. They may also have been exposed to neighbourhood or household disruptions, which led to children not sleeping enough or not being provided with necessities such as breakfast or clean clothes.
 Teachers also ran transition-to-preschool activities like preschool open days, family enrolment days or preschool visits timed to align with the dates of regular preschool intakes. Because many Aboriginal families tend not to engage in these types of ‘mainstream’ activities, the PRP was able to provide both practical support (transport and material support such as clothing for children) and long-term, relationship-based support to help sustain day-to-day participation with families who might otherwise easily disengage.

**The transition-to-preschool intensive**

The PRP team designed an ‘intensive readiness clinic’ to help children prepare for their first experience at preschool. Staff used a number of criteria for inclusion: children with a history of passive preschool enrolment (enrolled but not attending) or very low attendance; and children who had, at screening, been identified with significant health, behavioural, social or emotional concerns, or who had parents who self-identified as having difficulties supporting their children to attend preschool. These parents were not those who were simply ‘out of sync’ with routines, but those who identified major challenges at home such as chronic physical or mental health issues or family violence impacting on their children. Research shows that children growing up in environments with these challenges have a heightened risk of learning and developmental problems (AMA, 2013; Marmot, 2010; Moore & McDonald, 2013) and that vigorous intervention can be effective in reducing preschool readiness gaps (Perez-Johnson & Maynard, 2007). The intensive was trialled twice, in late 2011 (at a childcare centre, with 10 children) and in late 2012 (at a preschool, with 15 children).

During half-day sessions over a number of weeks, children participated in a program designed to reduce barriers to growth (such as social, emotional or behavioural difficulties) and provide appropriate stimulation for growth (including educational games, pre-reading activities and English language encounters). Parents were encouraged to get involved and were given daily feedback on their child’s progress. Teachers were also supported with follow-up planning for the next stages of transition.

Feedback from the pre-preschool intensives suggested they were a positive learning experience for all of the children with high needs. Attending children made gains against planned developmental goals, for example, in expressive language measured pre- and post-program, or in their ability to socialise easily with other children at their new preschool. There was also a very positive response from parents to seeing their children engage with preschool and succeed.

**Preschool readiness: Partnerships and advocacy for Aboriginal participation**

The program was implemented in all six Alice Springs government schools and two independent schools. The aim was to set up systematic collaborations among preschool teachers, school principals, Aboriginal liaison and inclusion staff and policy-makers. Preschool and PRP staff collaborated with enrolments and strategies, noted above, of making children feel welcome at preschool. PRP advocated for improved child health across the whole school, for example, by discussing prevention and treatment of conditions such as skin sores or otitis media.

Not all preschools were able to engage in negotiations with the PRP at the same level, and significantly, the greatest attendance gains were in the preschool with the strongest level of collaboration between the PRP team and the preschool educators. At this school, a number of specific strategies were enacted: the school principal and preschool educators championed working together; PRP staff made a presentation to the school council (the governance body) who committed funds to hire a small bus and recruit an Aboriginal home liaison position for preschool families; and the school principal organised to physically host one of the ‘pre-preschool’ intensives. Over two years this work brought about a reverse in very low numbers of Aboriginal children enrolling in preschool and the principal commented that the PRP had brought about a ‘turn around in connecting with Aboriginal families’.

In reviewing their collaborative experience, preschool educators reflected that they had previously felt limited by a lack of knowledge of how to contact families and limited resources for engagement.

Another example of constructive collaboration was evident in the conversations between health and preschool staff about the use of nappies. Preschool staff are likely to judge children wearing nappies as ‘not ready’ for preschool. It can cause embarrassment or shame for children and cause preschool staff to feel resentment about having to change nappies. These attitudes are at odds with the practices of many Aboriginal families where children are given a high degree of freedom in determining their own care and are often taught about toileting by peers and siblings. This may lead them to reject hygiene training attempted by carers. Further, Aboriginal adults have been observed to encourage nappy use for older children to prevent accidents in public or when sleeping, thus ascribing a function in public or when sleeping, thus ascribing a function to nappies that is different from mainstream settings (McDonald, Bailie, Grace & Brewster, 2009). To deal with this potential lack of alignment in understanding, PRP staff talked to parents about their beliefs about toilet training and about how children can learn to toilet themselves at preschool. They invited parents’ ideas for helping their children and staff with this need. PRP staff carried out the same conversations with preschool staff. Helping children to use the toilets and/or finish wearing nappies was provided as adjustment support. Collaborations such as these reinforced understanding about culturally based differences in expectations about raising children and provided openings for discussion about the role of preschool as a transition support.
The PRP evaluation

An evaluation of the PRP was conducted to assist the Congress management plan strategically for the next stages of implementation. Using a mixed methods ‘utilisation-focused’ approach (Patton, 2008), the evaluators analysed data linked to predetermined measures of performance and described both the working model and processes developed to achieve PRP outcomes.

Areas for quantitative review were data linked to key performance measures (including numbers of outreach visits, child health checks performed, child/family transition support activities) and data that informed understanding of the three- and four-year-old child cohort in relation to development or health concerns at or around the time of transition to preschool. Areas for qualitative review were the processes developed to achieve program outcomes: examples of practices and their outcomes and the perceived acceptability of the transition support put in place through the program. The core evaluation activities were undertaken through site visits where evaluators were able to observe a PRP working model (including attending outreach home visits, observing team members’ interactions with parents and the conduct of an intensive program in a preschool setting). Stakeholders were identified and contacted: 16 face-to-face interviews and one telephone interview were conducted with local education authority policy staff (4), school principals (2), preschool staff (3), PRP staff (3), parents (2) and other Congress staff (3).

Limiting factors were the small scale of the evaluation and the short timeframe for program funding, which meant that evaluation was required when the program had only just finalised its working model. Although a longer term implementation would have afforded a better assessment of the overall effectiveness of the PRP, data from the evaluation revealed a number of positive outcomes as well as some emerging questions relating to the broader educational endeavour. These are discussed in the following section.

Discussion

Many of the stakeholders’ views of the success of the PRP could be attributable to its design as a ‘universal’ town-wide approach, providing higher levels of transition-to-preschool support than had previously existed for the families and children most in need. The PRP was widely accepted and valued by families and education staff, who described the program variously as ‘very successful’, ‘highly effective’ and ‘an amazing service’. Stakeholders generally expressed enthusiasm about the future promise of the PRP. One Aboriginal family support worker, encapsulated this in her comment: ‘When I see the happy faces of these children and the proud faces of the parents who have gone through our program I have a lot of hope for their future’.

Data collected in the course of the evaluation indicated that the numbers of unenrolled children were not as large as had previously been thought. The original funding agreement had set a target of increasing Alice Springs Aboriginal preschool enrolments by 50 per cent. This figure was generated on the basis of no real data: in fact, before the PRP, little was known about the numbers of children not enrolled in preschool. In the event, there were fewer non-enrolled Aboriginal children than anticipated, and even when most families had been successfully contacted, the increase in preschool enrolments was modest, with an overall 16 per cent increase in preschool enrolments between 2009 and 2012. (There was considerable variation among preschools, with some showing significant improvements and some showing little or no change.) This scenario suggests that setting aspirational, ‘overambitious’ targets for these kinds of projects may serve to manufacture a misleading agenda; and it may be more important to focus energy and resources on gaining a better understanding of how Aboriginal families engage with non-compulsory preschool and other early childhood development services. It is also important to develop clarity about the ways that these services help children learn and develop. Thus, a more sustainable goal may simply be to enhance the quality of engagement by children and families with preschool.

The PRP work with families highlighted a tension between preschools’ expectations of parental engagement and the capacity of families to involve themselves in the educational process. The PRP experience of contacting families is consistent with findings from earlier Northern Territory research by Chenhall, Holmes, Lea, Senior and Wegner (2011), who found that, where Aboriginal people were disengaged from schooling, this was likely to stem from practical barriers independent of the school (such as transport, ill health, finances). Both Chenhall and colleagues’ research and the PRP experience serve as a counter to the widespread assumption that Aboriginal people generally feel intimidated and disenfranchised from schooling. On the contrary, all families who identified concerns about their child’s development or who needed practical support accepted assistance from PRP. While some parents worried about their children being cared for by outsiders, families overwhelmingly wanted their children to be involved in a preschool program.

The manager described the model as being able to provide differentiated support, or ‘proportionately universal support’. Proportionate universality describes programs, services and policies that are universal, but with a scale and intensity that is proportionate to the level of disadvantage (Marmot, 2010). The PRP manager noted that the model focused strongly on responsiveness to make sure that the level of intervention was ‘just right’, commenting, ‘It’s a Goldilocks approach: too much support is disempowering and we run the risk of being a “pest” … Too little and we don’t provide enough linkages for children and families
to gain traction with services’. The responsiveness and promise of this model suggests that developers of other interventions need to pay more attention to the interaction of the contexts between which children and their families move, such as home, clinic and school and the need for integrated, multi-focused and multi-component models.

As well as preparing children for schooling, the pre-preschool intensives had an observable impact on teachers’ perceptions of the participating children. Teachers noted that the students subsequently starting preschool were ‘not struggling’. They came to perceive the children’s challenges as transient, and rapid gains as achievable. Teachers also described how their own expectations of children’s readiness were modified. However, the PRP manager emphasised that more work needs to be done in the long term to understand specific developmental challenges and to design what might constitute an effective evidence-based intervention to get children to the level of their peers before they start preschool.

The successful gain in new preschool enrolments still leaves questions about how schools will be able to sustain children’s attendance in the long term. Of the 60 children directly enrolled in preschool through the PRP in 2012, 64 per cent were rated as having fair to good attendance, 12 per cent poor and 10 per cent not attending (the other children had left the town). Clearly there is a risk that many children will attend erratically or cease to attend altogether if they and their families are left without adequate systems of continuing support.

The PRP experience suggested that these support systems cannot be implemented in a mechanical fashion but are, of necessity, highly responsive and collaborative in nature. That is, health and preschool educators have a host of everyday practicalities to negotiate, including roles and routines, protocols for working together, what level of information about children to share between services, home visiting protocols and how to make families feel welcome in the preschool environments. Interestingly, the PRP collaborative work was instrumental in shifting preschool educators’ attitudes and fears that they would be overwhelmed trying to cater for larger numbers of Aboriginal children, many with high needs. These fears had been expressed by preschool staff and principals at the start of the PRP and were consistent with both AEDI data, suggesting that teachers generally felt that they could not meet the needs of 10 per cent of children in the first year of school (Australian Government, 2009b) and with broader research suggesting that mainstream teachers feel significant pressure to adapt to the needs of Aboriginal children and families (Harrison et al., 2012; Ware, 2012). With PRP support, however, preschool educators commented that they had not found it overly challenging to include additional Aboriginal children in their programs. Indeed, the shift in knowledge and attitudes between health and education workers which accompanied the new collaborative opportunities was one of the most promising PRP outcomes. Through working collaboratively with both health and education staff, the PRP staff were able to tackle beliefs and fears about parental and school capacity that had hitherto been largely unexamined.

Conclusion

The PRP developed locally relevant approaches to support urban Aboriginal children in their transition to preschool. In doing so, the program demonstrated that ‘vulnerable’ Aboriginal families can be reached and that, with appropriate support, these families are motivated to engage in sending their children to preschool. It provokes deeper discussion of Aboriginal access to early learning programs. As there is a constant call for comprehensive early intervention models that can contribute to closing the gap in disadvantage (AMA, 2013; Harrison et al., 2012; Wise, 2013), the PRP, as a multi-focused and multi-component model, should be shared widely. It is particularly relevant to the more than 100 other Aboriginal primary health providers across Australia.

The goals of the PRP were ambitious and predicated on an assumption that change can be wrought in entrenched systems in a very short time frame. However, in keeping with other studies, for example Dockett and Perry (2007), it was found that there were significant sustainability issues impacting on the PRP. Key among these were preschools’ commitment to outside collaboration and to change, and the ability of health and education organisations to work purposefully together. It also needs to be recognised that doing this work requires substantial time to establish dialogue between people and organisations and to bring visibility to previously undefined barriers to children’s effective participation. It would therefore be beneficial to evaluate the effectiveness of the PRP in a longer term study, particularly of the children who received the most intensive support.

Accurate measures of the PRP outcomes were somewhat hindered by a lack of information prior to the program about numbers of non-enrolled Aboriginal children and government tardiness allowing access to the enrolment and attendance data they regularly collect. One result of this was that education workers harboured considerable misapprehensions about numbers of high-needs children coming into their preschools. It is important that data about numbers of children in a population are accurate and available, particularly for early childhood services that cater for the populations where there is a perception of high needs. Thus, future collaborations of this kind should seek more formal agreements between health and education systems about access to and sharing of specific administrative data relevant to program design and implementation. This will not only help with better understanding across the services, but it will also help to build the data infrastructure needed for longer term evaluation of program efficacy and effectiveness.
Through innovative collaborations such as the PRP, service providers can design quality early education programs for disadvantaged children. The PRP town-wide approach has great potential for improving outcomes for all Aboriginal children in the community. Preschools are limited in reaching families before their children enrol, while non-government health care providers like Congress have a strategic advantage as they have wide family contacts and existing trusted relationships well before children reach preschool age. Under-enrolment by Aboriginal families in preschool is a longstanding and widespread issue in Australia, yet until now there have been very limited investments in thinking through local solutions. At this stage the government’s commitment to this kind of innovation is unclear. For example, a senior Indigenous engagement position in the local education authority that advocated for school innovations and collaborated with the PRP was short term and has not been further funded, and recent government cost-cutting measures have seriously disrupted the provision of school transport across the town.

Programs that promote the healthy development of young children serve to protect those children against adverse social and physical conditions and thus can have a profound impact on children’s life trajectories. The overwhelming weight of evidence of the long-term health, educational and economic benefits of children’s participation in quality early childhood programs would suggest that in times of fiscal austerity it would make better sense for governments to regard these as an essential investment rather than an unwanted cost.

References


Intergenerational collaborative drawing:  
A research method for researching with/about young children

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THIS PAPER FOCUSES ON the methodological effectiveness of intergenerational collaborative drawing (ICD). A group of eight researchers trialled this particular approach to drawing, most of them for the first time. Each researcher drew with young children, peers and tertiary students, with drawings created over a period of six months. The eight researchers came together in a ‘community of scholars’ approach to this project because of two shared interests: (i) issues of social justice, access and equity; and (ii) arts-based education research methods. The researchers were curious how ICD might methodically support their respective research processes.

As knowledge and theory about young children becomes more complex, researchers need responsive methodological tools to ask new questions and conduct rigorous, ethical research. This partial account describes how drawing together might perform methodologically. The data reported here draws from the detailed field notes, drawings and reflections of the researchers. Conclusions arise from the analysis of these reflections, with the authors suggesting ways in which ICD might benefit research with young children.

Introduction

Drawing is ever present in settings for young children. For some years, a number of researchers in the early childhood field have made close and rigorous scrutiny of children’s drawings. Although research that involves children’s drawings can be shaped by different conceptual frameworks, using drawing as a research method is not a simple matter of providing children with drawing materials. This paper details the experiences, encounters and experiments with a particular drawing method that was unfamiliar to a team of researchers: intergenerational collaborative drawing (ICD) (Knight, 2011; Knight, 2012). This procedure involves adults and children drawing at the same time on a single paper surface. As a research method, ICD sits within arts-based education research (ABER) methodology (Barone & Eisner, 2012; Eisner, 1981)—arts practices are used to investigate wider education issues and subjects. Drawing collaboratively can provide an opportunity to use perceptive thinking as a stimulus for drawing.

Arts-based inquiry has gained prominence around the globe (Butler-Kisber, 2010), spreading beyond arts and design-based research and into education and social sciences domains (Eisner, 2008). Making drawings can expose ‘cognitive processes, particularly creativity and the emergence of ideas’ (Garner, 2008, p. 23). Potentially, drawing can be highly effective in fields such as early years education because of its appropriateness to young children and to those researching with/about them. Nevertheless, arts-based inquiry is still a fairly recent methodological development outside arts and design research, and is unfamiliar to many education researchers. Testing drawing with a group of collaborators enables active investigation into its methodological potential.

This paper sets aside old questions around quantitative/qualitative research paradigms and focuses instead on Eisner’s challenge to ‘achieve binocular vision’ (1981, p. 9) through processes that collectively enrich knowledge. The eight academics who came together on this project were from three different universities in Australia and included PhD students, early career researchers, middle career researchers and senior researchers. They each work in the field of early years education and care and bring with them a range of interests and ideologies. Their common interests were in matters of social justice and investigating new possibilities for research methods that might be compatible with their various conceptual
frameworks, and prove both effective and ethical. They conducted drawings in various settings including their homes with family members and friends, at university with their students and peers, and in childcare settings with parents, workers and children.

The project was designed to introduce the researchers to an unfamiliar but appropriate research method for investigating early childhood educational ideas and issues. Through this exposure to and trialling of alternative educational research processes and tools, the eight academics came to new understandings about methodologies and how they impact on research. Through the use of ICD, some researchers reported increased receptivity to children’s ways for communicating and added to their ways of seeing social justice.

### The project

The project team had varying levels of skills and experience with drawing. One researcher maintained ‘I can’t draw to save my life’ (R1), while another was a practising artist and said ‘I draw daily and consider visuals my first language’ (R8). Overall the researchers were new to using arts-based inquiry.

The task was to produce drawings that would work as a means to critically explore issues around social justice, access and inclusion in the field of early childhood. It is unusual for a drawing methodology not to focus on the ‘meaning’ of the drawing. In this case this was not our aim. The primary goal was for the researchers to experience a new research technique. Drawings were created with children, peers, family members and university students. The aim was not to generate data on the meanings of the drawings produced, nor was it a close examination of the thoughts and/or opinions of those who were drawing. Instead, the focus was solely on the technique/s employed in conducting ICD with an aim to expose a diverse group of researchers to new ways of thinking about research activity. With this in mind, what constitutes the data in this testing is the extensive field notes, drawings, audio diary recordings and written reflections documented by each researcher. Together, these materials were collated and then critically analysed for evidence of the potential of this procedure (creating drawings together) as a research method for researchers with different prior drawing skills and experiences.

One of the problems embedded in some traditional approaches to children’s drawings is that there is a perception that no instruction is necessary; that people are just somehow naturally good at drawing and so the activity therefore does not need the same level of rigorous approach attached to learning about and using other methodologies. On the contrary, to begin this project, the team of researchers were introduced to highly rigorous and systematic ways for working. The *Four purposes of drawing*, developed by Drawing Power UK (Adams & Baynes, 2006), were used as stimulus prompts for the researchers’ thinking and actions. The idea of the four purposes—perception, communication, invention, action (Adams & Baynes, 2006, pp. 2–3)—worked as a focus for the researchers’ processes and also guided how they might discuss the process with their co-drawers. The drawings and reflections were neither generated nor analysed in the more conventional sense. That is to say, the drawings are not ‘read’ for meanings, use of symbols, or artistic intent. While full ethical clearance was obtained for the eight researchers and for collaborating drawers, only brief commentary made by co-drawers was remembered, as the drawings formed the primary material. The drawings and researchers’ reflections offer up rich thinking about the potential methodological value of ICD and about more ethical ways of working with children. It is this thinking that is reported in this paper.

To assist with this methodological approach, four research questions were agreed upon, which formed a framework for each researcher as they recorded their reflections:

1. How does drawing (taking into account the ‘four purposes’) enable personal, critical thinking about social justice in early childhood?
2. Does drawing, particularly collaboratively, help to communicate ideas and concepts in particular ways?
3. How might drawing facilitate possibilities for imagination and action for social justice in early childhood?
4. Is drawing an effective method for thinking, researching, communicating?

Each researcher used different ways to initiate, conduct and document their ICD experiences. Variations in materials, participants, time, space and frequency were all factors that developed in response to each researcher’s context, individual conceptual frameworks, levels of expertise and experience, as well as other factors. Similar to each individual’s drawings, the data sets displayed unique aesthetics and appearances, according to the researcher who drove the experience. In Figure 1, the researcher used a notebook in which she kept a sequence of drawings which were produced through an ICD process with her daughter (aged six years).

**Figure 1. Drawing about bullying. Researcher eight (R8) and daughter (aged six years)**
After the drawing sessions ended, the researcher would record her thinking on the page along with the visual texts co-created. Through this particular series, they conducted a conversation, which turned to the topic of 'bullying'.

Extracts from the researcher's notes include:

12/08/13 This is the latest of our drawings. As usual we had a chat about 'fairness' prior to beginning …

I then mimicked the figure (2), and proceeded to colour all three figures … (R8).

13/08/13 This morning we talked about this image a bit more and she told me more information about the scenario.

I see that this drawing allowed both of us visual information to point to and look at … This is more effective than trying to ignite a conversation with her (R8).

In the following section of this paper, the four questions that guided the research project are used to frame this partial account of first-time experiences of testing this method of ICD as research. The conclusions from this project draw on the thinking of the eight researchers and are offered at the end of the paper for those interested in how ICD might be an effective approach for researching with young children. The reflections provided by the researchers are not focused on the meanings of the drawings but on their experiences of engaging in drawing as research activity.

**Drawing for thinking**

When the focus is on perceptive thinking, it is possible to take some attention away from the style or aesthetic of the drawing. Instead, attention can be directed towards the complexity and layers of meaning that reside with the drawer, allowing the researcher to access 'what is perceived as personally significant' (Suominen Guyas, 2008, p. 31) to the drawer/s. For example, in Figure 1, the collaborating drawers could discuss an issue such as bullying and produce drawings around their perceptions about how or when bullying happens, rather than trying to prioritise how to convey a typical scene of bullying in a drawing (which a cartoonist or illustrator might do as part of a comic strip or picture book). In the drawings conducted on 12/08/13 and 13/08/13 the opportunity to think perceptively—foregrounding ideas and opinions rather than aesthetic considerations—helped to bring personal, external and material realities to the surface (Kress & Van Leeuwen, 2001). This shared conversation connected to issues of social justice in early childhood, which in turn prompted richer starting points in subsequent drawings. This became a cyclic process, where the act of creating the imagery forced ideas and perceptions to grow in considered ways, and vice versa—ideas and perceptions forced the drawing to grow in considered ways. The drawings supported the co-drawers in their interpretations of the topic and also helped form the intentions for further inquiry.

Throughout the project, the acts of making drawings with others in a number of different social settings (intergenerational family, child, students, peers) featured instances of personal contemplation, as well as self-review. Similarly to other methodological investigations (see Pithouse, 2011), researchers reported that they were prompted to think through things and revisit their own conceptualisations, particularly as they shared their experiences and perceptions with the other researchers. Researcher six (R6) wrote in her reflective journal:

*Re-considering drawing beyond being a pedagogical tool for research into children and development was an important challenge. When I used this new way of ICD as a research method for thinking about social justice, I found that it brought relationships to consciousness far more and in that sense it was intellectually stimulating (R6).*

Here, it seems that the drawing process has led to 'manipulation and development of thought' (Adams & Baynes, 2006, p. 3) in the researcher and suggests that the research process goes beyond a mechanical collecting of data. In another instance (see Figure 2), it is apparent in researcher three’s (R3) notes that she has shifted from a focus on the act of drawing being the main outcome of the collaborative experience, to an appreciation of the enabling capacity of the method to draw out detail in the information about the child’s perspectives on family life.

*In the case of an ICD made for this project [see Figure 2], the use of ICD as a research method gave rise to the topic rather than drawing as an art form itself … [and] was fruitful for the researcher who was interested in gathering a broader picture of the historical, conditional and social perspectives in a child’s family life (R3).*

**Figure 2. ICD about family life**

Drawing collaboratively opened up clear avenues for verbal and visual communication between drawers. In Figure 3, the drawing produced by researcher four (R4) and two children (aged seven and nine years), was preceded by a discussion on fairness. This term was chosen as one that might prompt children to express their understandings of some aspects of social justice and inclusion. The task of drawing first focused R4’s ideas about social justice, in order to introduce the task and its topic. The act of drawing together helped to continue the discussion as each drawing was created. Communication experiences can vary, but a significant impact from ICD includes the
high quality of the communication. In Figure 3, the drawers have demonstrated skills with verbal texts, perhaps more developed than with the visual. The words leave little to the imagination and might communicate clearly some aspects of the children’s understandings of fairness and justice. At the same time, there are challenges that arise when conducting any research with children, and communicating while drawing with others can present its own dilemmas. It is important that the context in which the drawing is produced is understood and communicated.

Throughout the project, there were a number of drawings that provided evidence that rich and complex shared thinking was initiated through the process.

**Learning together**

Researcher two (R2) engaged in ICD with her nephew and niece, who are university students from Cambodia studying as international students in Australia. In her reflections on the processes of producing Figures 4 and 5, R2 discusses her thinking about what she considers the catalyst for internalised ideas that clearly emerged on the page. She wrote in her notes:

> The drawing process explored living situations in two different countries. When the drawing activity finished, the comparison of two drawings made the participants and researcher together rethink that the drawings represented our different lives. … Furthermore, the two drawings show the diverse cultures of the two countries, and cultural differences are shown through the shared thinking and drawing. How international students value their life overseas was visualised. Therefore, the drawings acquired knowledge of diversity, by giving a tangible comparison of their experience of beach culture in Australia compared to their experiences from their childhood (R2).

It was through the process of drawing and discussing with her niece and nephew that R2 arrived at expressing these ideas. Whether or not others who ‘read’ these images come to the same understandings from viewing them is important to note. Barone and Eisner (2012) suggest that ‘arts based research … provides an image of those interactions in ways that make them noticeable’ (p. 3). The beach drawings worked to draw the attention of the drawers to the diversity of cultural experience:

> The drawing shows their ‘ideal beach’ in Cambodia. They felt that they did not have a lot of freedom in their home country compared to Australia. Linking to the research perspective, drawing provides a platform for the researcher and the artist [the nephew and niece] to explore the meaning of life experience together. Drawing made us feel that we noticed the beach experiences are linked to cultural differences, which we had not thought of before (R2).

For those researchers who already drew regularly, the activity sometimes forced a rethinking of the purposes for drawing. They were prompted to interrogate their habitual or usual activities for creating drawings—and drawing to ‘find out’ was challenging. For example, researcher five
(R5), an experienced and regular drawer, produced an ICD with a colleague after a difficult conversation about an issue. She turned to ICD to test the possibilities of thinking through the issue in a different way. In her notes, she maintained that the resulting drawing revealed unexpected details of the complex thinking in the discussion and appeared to encapsulate the problematic dilemma faced.

More than the drawing

Rich data generated through ICD is not simply confined to drawn images. Equally important is talking with participants, reflecting on the drawings and the drawing processes and asking participants to comment on the drawing. These are all notable moments in the procedure and highlight the credibility of the methodology. Researchers were exposed to how the act of drawing with others could make ideas, thoughts and theorisations visible, as well as aspects of their diverse experiences and histories. Co-drawers can be led to further thinking about the relationship between lived experiences, as well as what is important. Participation, reflection and analysis give voice to the meanings contained in the drawings.

In this project, the drawings sometimes became a mediating tool to support understanding of the collective ideas behind the images, which then influenced subsequent drawings. Often the children who participated were already thinking of what to draw in respect to themes, conversations, ideas and concepts that informed their previous work. On a number of occasions, the researchers noted that the drawers often sustained their thinking about concepts and could express their theorising on things encountered in everyday life between one drawing episode and the next. Drawing with others helped initiate ideas and intellectual exploration on particular themes and concepts. For example, the drawings of the beach experiences (Figures 4 and 5) crystallised shared thinking between the researcher and her co-drawers and prompted further exploration of world diversities and lifestyle differences among people in different cultural contexts.

Drawing for action

Drawing collaboratively often helped the researcher and the other drawers explore life experiences together and then put this into action by looking at social justice in additional contexts. As an example, for one researcher, ICD prompted thinking about cultural difference and what international students think about emigration. She went on to build this thinking into her planning for further research, as well as follow-up learning experiences for all her students. Here, the familiar was juxtaposed with the unfamiliar to ‘form a bridge between the realm of the imagination and implementation’ (Adams & Baynes, 2006, p. 3)—to extend on prior thinking, imagery and possibilities; to pursue an idea further.

The four purposes of drawing: perception, communication, invention and action (Adams & Baynes, 2006, pp. 2–3) help to take drawing beyond the singular ‘art’ classification. The project brought about a realisation that drawing, whether produced by adults, children, novices or experts, contains purpose and intention that connects to many different contexts and stimuli. This richness can make ICD a highly appropriate and potent method for researching with young children, students, peers and others.

Communicating

Perhaps somewhat predictably—but important nonetheless—drawing with others was thought about as a way to communicate and bridge language barriers. For example, when R6 drew with her group of international tertiary students, they sometimes found it difficult to explain their ideas about social justice verbally, whereas the drawing helped illuminate what they wanted to say.

Drawing techniques also offered up opportunities for communication. Although many participants were adults, not all were confident about drawing, even when willing to contribute to the project. Having an emphasis on communication was useful in allaying their hesitancy. Participants’ reluctance often prompted discussions about why aspects were drawn in particular ways, or why particular techniques and/or media were used. Rather than draw something because it looked beautiful or pleasing, these drawings often worked through ideas about social justice. Responses focused on explaining how the icons and marks, colours and materials in the drawings helped to uphold the concept behind the drawing, resulting in experimentation with media and techniques to work through ideas. Arts practice—the physical manipulation of tools and the body to make marks—when thought of as corporeal theorising, ‘evokes embodied responses’ (Butler-Kisber, 2010, p. 102). Some of the researchers claimed to have not drawn since their own early childhoods; however, diverting attention away from skills to purpose worked to allay some of their fears and reluctance.

Drawing aided communication for the researchers and the co-drawers, in the same way that Burke and Prosser (2008) claim is important for young children. They insist that using visuals—especially drawings—with children is particularly critical for connecting with their thinking: ‘children have the ability to capture feelings and emotions through drawings and paintings while lacking an equally expressive written or spoken language’ (Mitchell, Theron, Stuart, Smith & Campbell, 2011, p. 20). The ICD experiences in this project often saw this same effect played out. The drawing procedures helped to capture feelings and emotions, especially when the written or spoken language of collaborating drawers was developing. R5 asked one of her children to draw with her, focusing on the experience of being in an overseas country together. As they drew, what started with symbols and markers of that other culture
then gradually changed to reveal something of the emotion below the surface. The daughter drew a person dragging a heavy cart through the street and this became the focus of the drawing. Previously, their communication had centred on the typical holiday responses around ‘having a good time’. The drawing revealed that together they had noticed some of the everyday life experiences of the people and had felt a range of emotions about the trip that were more challenging.

The authentic ways that drawing can communicate ideas and concepts were often observed by the researchers and noted in their reflections. Ideas and concepts were sometimes thought about before marks were made on the paper; at other times, this occurred simultaneously; and in other instances still, concepts became apparent or understood after drawing. While there appeared to be no linear system for these thought–activity relationships, to draw without thinking results in visual doodling or thoughtless work. Drawing collaboratively in response to a key research context (in this case, social justice issues) meant that the thoughts were focused and fed through into the drawing.

**Researching the research**

Research of any kind should lead to change; of thinking, policy, procedure or understanding. Diversity is an important feature of a robust research community and this project brought together a group of individual researchers with diverse backgrounds, experiences, approaches and theoretical paradigms. The process of ICD is driven by a desire to learn with young children, enabling communication that recognises and celebrates diversity and is ethically respectful of researching with young children—in this instance, researching about social justice in the early years.

Using qualitative methods for action relies as much on the capacity of the researcher to produce good quality research. ICD is a tool, much like a focus group or a latitudinal snapshot is a researching tool—it can be used well or badly. The method/tool is not in control of research quality, but it should help significantly to achieve high-quality findings. All the researchers noticed the research relationship as they participated in the process and were not spectators or collectors. They all believed that the process felt more ‘equal’ and less conventional as data were generated through joint activity.

Research outcomes are difficult to achieve without possibilities for action being articulated and initiated. A significant focus of this trial of the method was to consider how drawing might change thinking about appropriateness and/or usefulness of researching techniques. While the project involved drawings with others, this was also about self-study. The eight researchers supported each other in this work, forming a community of scholars (Irwin, 2008) who were new to arts-based educational research methods. The community also enabled a collective examination of ‘social justice’ in early childhood from a range of existing research and ideological paradigms.

Theorising about action through drawing was not always easy in this project. ‘The art object is ambiguous in its communicative character’ (Saorsa, 2004, p. 1) and some drawings were at once meaningful and meaningless—a way of trying to think together through a conversely more difficult ‘language’ than just using words. The drawing episodes seemed on occasion to be unmemorable, yet long afterwards, interactions with drawers could often be recalled clearly. Although the activities did not always seem profound, they brought concepts ‘to the surface’ and initiated desires to advocate for the presence of the child. Despite initial apprehensions on the part of the researchers about trialling the method, many frequently reported that making drawings provoked a desire to ‘do something’ about the issues around social justice.

The act of drawing with others seemed to spark a forward movement in thinking about options and ideas for change. In one session with a young child, the experience of drawing prompted discussion at some depth about what the words ‘social justice’ might mean for young children. Researcher seven (R7) wrote in her reflections:

> **Drawing seems really comfortable for the child I researched with.** Even though he wasn’t drawing anything recognisable to me, the act of drawing seemed to help him make connections between ideas, and to allow me to identify moments when new directions for inquiry might be possible. For example, a comment about a spider being in a cage led to inquiry into who put the spider there, and who made the rules that the spider had broken. On another occasion, this could be followed up either with drawing or another method, to discuss the child’s understanding of these issues of power and justice (R7).

This trial process of drawing collaboratively with others offered a glimpse of how research with/about young children can be finely tuned in respectful and just ways. Ethical research practices are crucial to contemporary research that seeks to learn about diversity and increasing complexities in the early years.

**Drawing in the research space**

One result of the project was the awareness of new understandings about drawing, not only as a literal space, but for its ‘metaphorical and qualitative features as well’ (Barone & Eisner 2012, p. 48). Such ‘findings’ grew through dialogues, Skype sessions, emails and sharing of visual works. In one group discussion, R1 described how one of the young children she was drawing with began to scribble all over her drawing. This initial observation prompted a lively exchange of experiences and views amongst the group.
R8 was very familiar with such behaviours, which she had regularly observed while drawing collaboratively with her own daughter. For R1, these actions resonated with her sustained interests in and investigations of issues of power, resistance, voice, young children and social justice.

Issues of equity extend also to the community of researchers. For those who already used drawing to think and theorise, the opportunity to be involved in this project gave validation to those corporeal knowledges. R8 wrote about how this way of researching prompted a feeling of freedom, joy, connection and deeper understanding about research and its connection to thinking:

It was interesting for me to see others who were surprised that drawing accessed new thinking. I was able to reflect on my practice and see capacities I have that I had taken for granted … The shared experience between the researchers inspired me a lot in my own collective drawing (R8).

R6 asked her group of tertiary students how they felt about the process. They used words like ‘refreshing’ and ‘surprising’. One student observed that he found it ‘freeing’ once he understood the explanation that the drawing was not in any way ‘a work of art’. Another student described what she termed the ‘open-ended’ nature of the activity, and observed that she enjoyed it because she did not have a sense of any requirement to ‘meet expectations’ or get it ‘right’. This, she said, helped her to think about several different things at once.

Discussion

The project shows sound evidence of the capacities for ICD to work as a research method across diverse contexts and in different circumstances. This is not to say it is without need of further refinement and development. In the final section of this paper, some suggestions are offered to address the need to ensure rigour and integrity in this innovative approach to research.

A significant realisation that emerged from the researchers’ experiences and reflections was the need to actually do drawing in order to research its use as a methodological tool. According to Eisner (1981), participating in drawing ‘is a critically important skill for those doing artistically oriented research in education’ (p. 7). The act of doing drawing immersed the drawers (the researcher–drawers) in these activities and the resulting conundrums that appeared.

This recommendation that researchers need to draw produces a number of points of resistance. Some of these hesitancies are linked to how researchers might feel about their own skills for drawing. The enduring romances around childhood art include beliefs that children’s drawing is always ‘innocent’, cathartic, or innate. It is not necessarily true that children ‘naturally’ prefer to draw rather than speak or write. Visual practices are not primarily about saving, salving or solving; they can create messiness, they can be difficult to work through, and they can initiate problems, which might then be theorised (Vicars, 2011). This isn’t always obvious, particularly to researchers who do not produce drawings themselves, but rather, simply observe them being created by others.

Debates about arts-based research prevail. Creating any visual work and declaring it as research is certainly problematic, but questions about whether anyone can properly use this drawing procedure as methodology, or whether there is a requirement that a certain degree of artistic/discipline knowledge is needed, upholds a singular definition of what art is and why it is created. To judge arts-based, research-driven drawings produced by researchers and participants against drawings produced by an experienced artist for exhibition, demonstrate a crude misunderstanding of the sizeable differences between the two forms of production and of their purposes. Visual works, in the same way that written works do, perform many tasks and therefore take different forms and have differing levels of quality. Research-based drawings do not take the same form as the fine art drawings produced by the practised artist. However, the reliability of using research-based drawings rests upon maintaining the meanings embedded in the drawings as true to their original state as possible—and not overly interpreted by the researcher.

Drawing may be confronting for researchers who haven’t drawn for some time, however this should not dismiss its credibility as a workable method. Researchers encounter new methods and new modes for data generation and collection all the time (such as web-based questionnaires, video capturing, new computer data management programs). Often researchers ‘roll up their sleeves’ and learn these new skills. Resistances to drawing might then connect to a deeper mistrust of the arts as being able to offer credible modes for thinking and investigating.

Drawing is no less functional than using other forms of communication to convey information. In a literal society, we are used to using and relying upon a different set of marks to record our ideas, evidences and thoughts. For example, writing is a more familiar communication mode; however, drawing also offers capacity to record evidence and thoughts. Statements about drawing not conveying anything is certainly problematic, but questions about whether anyone can properly use this drawing procedure as methodology, or whether there is a requirement that a certain degree of artistic/discipline knowledge is needed, upholds a singular definition of what art is and why it is created. To judge arts-based, research-driven drawings produced by researchers and participants against drawings produced by an experienced artist for exhibition, demonstrate a crude misunderstanding of the sizeable differences between the two forms of production and of their purposes. Visual works, in the same way that written works do, perform many tasks and therefore take different forms and have differing levels of quality. Research-based drawings do not take the same form as the fine art drawings produced by the practised artist. However, the reliability of using research-based drawings rests upon maintaining the meanings embedded in the drawings as true to their original state as possible—and not overly interpreted by the researcher.

A further challenge links to the ethical questions that might arise. In this project, the usual power relationships between the researchers and students, family members, children and peers were somewhat disrupted. Often the hesitant in using an almost forgotten skill shifted those power relationships fairly significantly. ICD is presented as a highly appropriate method for accessing thinking and communicating, that provides authentic (to some
degree) access to children’s and adults’ ideas. However, it is necessary to ask whether children were aware of the research purpose, or simply were impressed or persuaded to participate because of the researcher’s (unusual) interest in them? In many ways, this is a question asked by a number of early childhood researchers, using a variety of methods. These ethical concerns coincide with those of other researchers in being ever mindful of the interactions with research participants. While searching for methods that provide ever more insights into the thinking and actions of children, it is essential that the conduct of research with children and their families is as ethical and respectful as possible.

**Conclusion**

Thoughts are not static; they constantly shift and change. Furthermore, thinking is not a regulated procedure, but an unpredictable exchange between experiences, ideas, reactions and actions. Irrespective of age, thoughts impact and interact on/with the drawer and their drawings by the eye ‘receiving feedback from the marks appearing on the page, which prompt further thought and mark-making’ (Adams & Baynes, 2006, p. 3). These processes are enriched when people collaborate on a drawing and their ideas and thoughts intermingle and collide. The act of drawing is slow, so it enables careful and prolonged interrelated thinking on a topic. When lines and marks are formed through the physical relationship between the hand, the drawing materials and the paper in order to make an image, there is time for the drawers to refine, change and shift their ideas, and to turn those ideas into theories and rationales. Drawing with others is rarely a singular experience as it is usually accompanied with discussion, questions, physical action, stories, suppositions, songs and onomatopoeic sounds. This multiple activity helps to perpetuate the reflexive oscillations between thoughts and drawing. ICD can help to visibly manifest this oscillation for research purposes as it can enable drawers to refine, question and debate their ideas and concepts. This creates rich data for interpretation and analysis.

This collective experiment with ICD to examine social justice issues brought about new critical thinking: (i) about how the process might work in research projects; and (ii) what might be shown both graphically and expressed in words in the drawings produced. The collective interpretations of the project aims were diverse and did not align with one paradigmatic theory about social justice. The investigation was incredibly rich thanks to that diversity and the method was pursued differently by each researcher. Thinking of drawing as a researching tool placed emphasis on what drawing can ‘do’, not what a drawing ‘is’, nor necessarily, what it ‘means’. ICD engaged in a way of researching that is sensitive to the communication preferences some young children (and adults) use. Through the use of this procedure, interrelationships were promoted and the method complemented the cache of research methodologies already used within educational research.

The drawings produced operate beyond the realm of the casual doodle, or ‘child art’. In this trial, ICD offered glimpses into the type of drawings that can be made, and these challenged essentialising statements about children’s drawings. The experience helped raise consciousness of the status of varied ways of being, knowing and belonging, within an increasingly word-centric, standardised view of learning and intellect.

In the contemporary world, access and equity are major issues for researchers, children, practitioners and parents. Developing effective ways for thinking about social justice, promoting social justice and supporting socially just ways for communicating with each other are more important than ever before. For early years researchers, new approaches to drawing with children, and/or interpreting their drawings is of significant benefit, at a time when understandings, conceptualisations and theorisations aim to be as responsive as possible to the diverse needs and identities of young children.

**Endnote**

The project reported in this paper forms part of the activities of the Excellence in Research in Early Years Education Collaborative Research Network (EREYE CRN). This consists of a collaborative of over 65 early childhood academics across three Australian universities: Charles Sturt University, Monash University and Queensland University of Technology. The EREYE CRN network is focused on capacity building among early childhood academics and developing a strong evidence base of research in Australia through: knowledge and skills building; networking; project and publishing collaborations; and also expanding knowledge about research methods and approaches.

1 For more on this, see, for example, Kellogg, 1959; Golomb, 1974; Matthews, 2003; & Wright, 2010.

**References**


Introduction

Notions of ‘childhood’ have changed profoundly throughout history. Currently, early twenty-first century children are being afforded rights that would have seemed inconceivable merely a generation ago. Today’s ideas about ‘childhood’ regard children in light of who they are now, rather than who they will become (Palaiologou, 2012). With this postmodern perspective comes a refocusing of attention on the child’s ‘existing and emerging competencies’, instead of the more negative ‘adult-like qualities they still lack’ (Broström, 2012, p. 258). Young children are regarded as experts on their own lives (Clark & Moss, 2011) with specific communication skills and competencies (Morrow, 2008). Generally speaking, less attention is being paid to the differences between adults and children as belonging to distinct groups and more emphasis is being placed on children as ‘people’ (Kirk, 2007).

At the same time, there is a growing focus on children’s rights to participation as a result of the United Nations’ Convention on the Rights of the Child (UNCRC) (UN, 1989). Now widely recognised as the foundation on which to build future practices that uphold the best interests of children, the Convention promotes children’s autonomy, agency, empowerment, voice and participation (Loveridge & Cornforth, 2013). Looking back, the adoption of this Convention was a defining moment in the sociology of childhood and now empowers children as holders of rights (UN Committee on the Rights of the Child, 2006). This has
led to children’s rights policy maturing to open the way for young children to be included in research as genuine participants and social actors in their own right, rather than merely ‘objects’ of research (Christensen & James, 2008). In research practice, children are considered capable of making valid contributions about their ‘perceptions, expectations and experiences’ and should be involved, not as future citizens, but as citizens (Perry & Dockett, 2011, p. 232).

The Convention also forms the foundation for a rights-based approach to EC participatory research. It establishes the principles of self-determination (Article 1), non-discrimination (Article 2), the best interests of the child (Article 3), right to life, survival and development (Article 6), and freedom to participate and be heard (Article 12) for all children as basic human rights (Beazley & Ennew, 2006). In addition, a rights-based perspective of research participation requires that young children are supported and guided by adults (Article 5) and have the right to seek, receive and communicate information (Articles 13 and 17) (Lundy & McEvoy, 2012) in ‘formats appropriate to their age and capacities on all issues of concern to them’ (UN Committee on the Rights of the Child, 2009, p. 20).

Such rights-based approaches to research reflect young children’s right to have their opinions, agency and ability to make sensible decisions, taken seriously (Dockett, Perry & Kearney, 2013). Seen as appropriate for young children, a rights-based participatory methodology positions children, regardless of age, as competent to become collaborators in the research journey (Harcourt & Hägglund, 2013). This brings with it a range of ethical complexities which include the need for consent to become a continual process of negotiation between researcher and child (Loveridge & Cornforth, 2013) and an understanding that children’s rights, research methods and research ethics are intrinsically connected (Morrow, 2008).

The message from rights-based early childhood literature is that a shift in the nature and application of research involving young children has occurred (Dockett, Einarsdóttir & Perry, 2012, p. 244); however, to what extent this is evidenced in published papers has not been documented to date. The purpose of this paper is to present the results of a meta-analysis of 10 international scholarly education journals that provide a broad picture of reported early childhood research practices. Such results will shed light on how young children are currently reported as being involved in research and whether an ideological shift towards more participatory approaches is filtering through to early childhood research practice. Additionally, this paper draws together what is known about the status afforded to children in research, the way children are positioned by researchers and the unique culture that develops within research projects. It also introduces a Rights-based Research Accountability Framework for assisting researchers to navigate the accountabilities inherent in conducting early childhood research.

Literature review

In this paper, research involving young children is described through three dimensions: the status afforded to child participants by the researcher’s view of ‘childhood’; the researcher’s perspective of how children can be engaged in research; and the degree to which a respectful research culture shapes attitudes and interactions between adult and child. In each dimension, children are positioned differently according to the way children’s right of participation is enacted in research practice.

Child status

Research can involve young children in a myriad of ways with approaches being strongly influenced by the researcher’s views about children and their personal image of ‘childhood’ (Woodhead & Faulkner, 2008). Traditional approaches tend to involve children as objects or subjects to be studied. More recently, children are being involved as social actors and active participants (Harwood, 2010). Thus, if research approaches are viewed in terms of a spectrum, at one end we would see traditional approaches that focus on ‘concepts, experimental approaches, theories or interventions’ (Harwood, 2010, p. 4) and at the other, approaches that focus on children’s perspectives and agency (Johnson, Hart & Colwel, 2014). The four classifications that have emerged in published literature view the child as an object, subject, social actor or participant (also referred to at times as active participant, co-participant and co-researcher). According to Christensen and Prout (2002, p. 480), each view is not necessarily exclusive and should not be regarded as occurring as a ‘neat progression’. However, there is a danger that lines can be blurred when ‘ethical implications of newer approaches are not consistently thought through’ (p. 480).

With the more recently emerging fourth role, the terms participant, co-participant (Harwood, 2010), active participant (Kirk, 2007) and co-researcher (Kellett, 2005) are often interchanged in published research. The term active participant is one of the more common terms used for the fourth category, however this term is also often used to describe children who are ‘participating actively’ in research. In contrast, the term participant or active participant in the context of child status within research means that the child is explicitly involved in planning, conducting, analysing or disseminating research. This has led to conflicting and inconsistent use of the term, resulting in confusion about the meaning and level of child participation in certain contexts (Kellett, 2010). Given that co-researcher is also widely used (Powell, Graham, Taylor, Newell & Fitzgerald, 2011), we suggest it as the most appropriate term for the fourth category of child status, and have used it consistently throughout the paper.
Children as objects

Traditional approaches to research tend to treat children as ‘unknowing objects of research’ (Powell, Fitzgerald, Taylor & Graham, 2012, p. 13), where children are not asked for their consent and where it is unlikely that they are aware that they are the focus of research (Alderson, 2005). Here, adults document and interpret children’s ‘journeys to adulthood’ using paternalistic methods that largely ignore what the children themselves can contribute (Mason & Hood, 2011, p. 490). The role of the child is limited, with children typically being viewed as dependent, vulnerable, and lacking in competence and credibility (Harwood, 2010). Adult researchers who view children in this way tend to believe that they are not capable of understanding the purpose of research. Children are perceived as ‘lacking the ability to consent to it or have a voice in its design, implementation and interpretation’ (Christensen & Prout, 2002, p. 480). In essence, children as objects are regarded merely as a means to collecting data without consideration of the children themselves (Thompson, 1990).

Children as subjects

Evolving alongside the child as object perspective is the second, more ‘child-centred’ approach on the child research spectrum which views children as subjects. Levels of involvement tend to be dependent on the child’s age, development and maturity, and on the researcher’s perception of their cognitive and social competence (Christensen & Prout, 2002). Children tend to be aware that they are being researched and may be asked for their informed consent (Alderson, 2005). Adults include children as passive semi-participants, with the role of the child being limited to surveys and questionnaire-based interviews that support the researcher’s original objectives (Harwood, 2010). By default, children as subjects are not afforded opportunities to influence decisions or relationships, or to make personal contributions affecting the direction of this largely ‘adult-centric’ approach to research (Mason & Hood, 2011).

Children as social actors

A relatively recent orientation on the research spectrum is that of children as social actors. Here, adults base their approach on the new sociology of childhood and children’s rights theory and seek out children’s own perceptions and opinions. Children are viewed as co-constructors of their own learning (Smith, Duncan & Marshall, 2005) and capable of interpreting their world and participating in decisions that affect them (Mayall, 2002). Flexible methods of data collection such as semi-structured interviews, ‘exploring topics through focus groups or drama, diaries, photos or videos, paintings or maps’, provide opportunities for children to contribute their own personal narratives (Alderson, 2005, p. 30). Thus, research with children as social actors involves acknowledging children as capable of social action and identifying areas where children can base interactions in and through relationships (Hendrick, 2008). This shift in thinking moves children away from being perceived as passive objects towards being viewed as active and competent participatory agents in their own right (Mayall, 2000).

Children as co-researchers

The fourth and most progressive approach places children on the research spectrum as co-researchers (Christensen & Prout, 2002). This perspective builds on the idea of children as social actors by including them as an integral part of all aspects of the research process: involvement in ‘defining the research question, method, analysis, and dissemination’ (Harwood, 2010, p. 5). Article 12 of the UNCRC supports the idea that children be ‘involved, informed, consulted and heard’ in active roles as co-researchers (Christensen & Prout, 2002, p. 481) and can begin to exercise their rights of participation through both verbal and non-verbal interactions (UN Committee on the Rights of the Child, 2006). Thus, the perception of children as objects or subjects of research is gradually being replaced by an image of young children as capable of genuine participation (Woodhead & Faulkner, 2008) and influence within the research process.

Researcher perspective

Researcher perspective relates to how researchers engage children in research. Research can be conducted on children, with children and by children (Clavering & McLaughlin, 2010). The way this is applied is largely dependent on the researcher’s perspective of how adults and children should be positioned within the research.

Research on children

Both quantitative and qualitative research methodologies employ research on children, where the adults in the child’s world, such as parents and teachers, define and interpret children’s perspectives. Here, children continue to be viewed as objects, with adult-centric perspectives guiding the research approach (Clavering & McLaughlin, 2010). From the researcher’s perspective, children are regarded as lacking rational capacity and are subsequently denied agency (Hendrick, 2008). Despite only engaging children at a superficial, non-participatory level, historically much has been learned about children through research on children. However, it is particularly important to note that this perspective does not address the rights of children afforded under the UNCRC and children’s concerns are ‘filtered through multi-lenses of adult-orientated concerns’ (Clavering & McLaughlin, 2010, p. 606).

Research with children

Researching with children involves some level of partnership and collaboration between researcher and child participant, and provides children with opportunities to speak out and be heard (O’Kane, 2008). According to Mason and Hood (2011, p. 493), the researcher’s perspective is two-fold: adopting a theoretical position...
that is interested in listening to children, and enabling children’s agency. Research is repositioned as an empowering process with researchers as facilitators who seek ‘information-sharing, dialogue, reflection and action’ (O’Kane, 2008, p. 138). In order for research with children to be successful, opportunity for children to co-construct knowledge, respect for children’s developing capacities and reflexive researcher relationships, are all essential (Mason & Hood, 2011).

Research by children
Research by children is characterised by empowering children to become involved in setting up and implementing their own research agenda. This perspective largely stems from children’s participation rights mandated by the UNCRC. As a result, rights-orientated researchers are engaging child researchers more holistically in ‘selecting topics, questions, samples and observation sites through data collection to analysis and reporting, dissemination and policy discussions’ (Alderson, 2001, p. 146).

A respectful research culture
At the heart of respectful child research is a research culture grounded in the belief that young children are ‘entitled to be involved, are competent to make a valid and valuable contribution, can provide a unique and valid contribution based on their own experience and operate as active agents influencing the world around them’ (Lansdown, 2005, p. 19). The child’s research experience should be based around reflexive, reliable and affectionate researcher–child relationships, along with respect for the child’s personality, talents and mental and physical competencies (UN Committee on the Rights of the Child, 2006). Christensen and Prout (2002, p. 482) describe involving young children in research in a genuinely respectful manner by acknowledging the value of their voices, encouraging participant autonomy and providing appropriate support. Further, they refer to ‘ethical symmetry’ where the same ethical standards are applied to all participants, both adults and children. Ultimately, a respectful research culture relies on a genuine listening attitude where researchers are aware of, and willing to act upon, ethical considerations such as issues of informed consent and dissent, power, access and relationship.

Method
Full details of the meta-analysis methodology on which this current paper is based can be found in Mayne and Howitt (2014), where ethics reporting practices across 10 international EC education journals were presented. Education-based, peer-reviewed primary research articles published between January 2009 and June 2012 (inclusive), involving young children birth to eight years as participants, were examined. Of the 1542 articles reviewed, 506 articles were identified as relevant. Information on each article was collected to determine child status, researcher perspective and whether or not the article reported a respectful research culture.

Child status
The child participants in each article were coded into one of four categories of child research status: child as object; child as subject; child as social actor; or child as co-researcher. Descriptions for each approach have been adapted from the summary in the literature review and are presented in Table 1.

Table 1. Descriptions of child research status

<table>
<thead>
<tr>
<th>Child’s status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child as object</td>
<td>Child is typically regarded as dependent, vulnerable, incompetent and lacking credibility. Child is unlikely to be aware of research involvement or asked to consent. Child is observed by the researcher and makes no personal contribution. Data is obtained with a strongly adult-centric bias.</td>
</tr>
<tr>
<td>Child as subject</td>
<td>Child is regarded as a semi-participant based on the child’s age/ability. Child may be asked to provide informal agreement to participate. Child is personally involved in some way (e.g. is interviewed). Data collection supports the researcher’s focus.</td>
</tr>
<tr>
<td>Child as social actor</td>
<td>Child is regarded as equal to an adult participant and as a co-constructor of learning capable of interpreting their world. Child is likely to have some understanding of the purpose of their involvement. Child is actively involved, willingly participates and makes some decisions. Data collection is likely to be flexible with children’s personal contributions being encouraged.</td>
</tr>
<tr>
<td>Child as co-researcher</td>
<td>Child is regarded as a co-researcher and as capable of genuine participation. Child understands the purpose of the research and begins to exercise rights of participation. Child contributes to defining the research question, method, analysis and dissemination of results. Data collection is overseen by the adult who is sensitive to the child’s preferences and focus.</td>
</tr>
</tbody>
</table>
The child’s status was determined by reviewing each article for information about the role of child participants within the project and the level of agency afforded to them by the researcher(s). Judgements were made by scrutinising the language used to describe the child’s involvement based on the established definitions presented in Table 1. This included reviewing descriptions of methodology and approaches to data collection. For example, articles that described data collection in terms of standardised instruments and observational measures, with no knowing contribution from the child participants, were generally coded as *child as object*. Studies that engaged children in ‘special tasks’ or interview assessments, where decisions to include child participants came exclusively from their adult carers, were generally coded as *child as subject*. Articles that included information about children’s personal contribution or agency were coded as *child as social actor*. Studies that involved children in planning, conducting, analysing or communicating were coded as *child as co-researcher*.

### Researcher perspective

The way researchers engaged children in research was categorised as *research on*, *with* or *by* children according to the descriptions presented in Table 2. The arrows included in Table 2 illustrate the relationship between the researcher and the child participant. The methodology and/or data collection methods for each article were reviewed for information about the researcher’s perspective towards children’s involvement in the research. Where necessary, the article as a whole was considered.

Table 2. Descriptions of researcher perspective

<table>
<thead>
<tr>
<th>Researcher perspective</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Research on children** (↓) | - Typically involves researcher observations of child.  
- Characterised by researcher ‘looking down’, with child unaware of the reasons for his/her involvement.  
- Generally consistent with child as object of research. |
| **Research with children** (↔) | - Typically involves researcher-led interviews or testing.  
- Characterised by researcher and participant interacting ‘horizontally’ with child having some understanding of reasons for his/her involvement.  
- Generally consistent with child as subject or social actor. |

Articles that conducted *research on children* were those characterised by an adult-centric approach, with the researcher focused on statistical techniques or numerical data (Mason & Hood, 2011). Research that omitted information about consultation of child participants, described data being interpreted based on adult perspectives, or with child participants’ involvement, supporting adult agendas were also coded as research on children.

Articles that conducted *research with children* were those characterised by more of a collaborative approach on behalf of the researcher towards the child participant, ‘where both adults’ and children’s voices influence the research’ (Bitou & Waller, 2011, p. 65). Studies that recognised children as competent research partners by engaging children in dialogue and positioning them as contributors of valid data were regarded as conducting research with children.

Articles that conducted *research by children* were those characterised by children being supported to plan and conduct their own investigations (e.g. making decisions about the research design, analysis of data and/or dissemination of results) (Wullemsen, Hugaas & Studsrød, 2014). This included studies that described children as researchers who were acknowledged as the primary source of knowledge about their own views and experiences (Alderson, 2001). A key aspect of research by children included self-initiation where child participants were empowered to take action and were not merely responding to an adult-defined agenda (Lansdown, 2005).

### Respectful research culture

Based on the information from the literature review, a respectful research culture was defined as a listening approach that acknowledged young children’s voices, supported agency, encouraged autonomy and/or sought to uphold the overall ideals of the UNCRC. A more thorough description of a respectful research culture in relation to children and the researcher is presented in Table 3. The researcher’s approach was categorised either as respectful or non-respectful in line with the description provided in Table 3. Evidence supporting a respectful approach was identified from text that referred to the rights of the child,
listening to the child’s voice, explaining the research to the child and/or their role as a participant, providing the child with choices and/or opportunities to make decisions, or seeking to address issues of power imbalance. For example, articles that described how researchers adapted to meet the needs of their young participants (e.g. using flexible methods of data collection) and sought to minimise power relationships, were coded as respectful.

Table 3. Description of respectful research culture

<table>
<thead>
<tr>
<th>A respectful research culture acknowledges that:</th>
<th>Researchers:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children:</td>
<td>acknowledge and value young children’s voices</td>
</tr>
<tr>
<td>  ■ are entitled to be involved as genuine participants</td>
<td>encourage autonomy and provide appropriate support</td>
</tr>
<tr>
<td>  ■ are competent to make a valid and valuable contribution</td>
<td>are aware of (and willing to act upon) ethical considerations such as issues of access, consent/dissent, power, research roles and researcher/participant relationship.</td>
</tr>
<tr>
<td>  ■ provide a unique contribution based on their own experience</td>
<td></td>
</tr>
<tr>
<td>  ■ can operate as active agents influencing the world around them</td>
<td></td>
</tr>
<tr>
<td>  ■ have the right to be informed and to provide autonomous consent.</td>
<td></td>
</tr>
</tbody>
</table>

A respectful research culture is based on:

■ reflexive, reliable and affectionate researcher–child relationships
■ respect for the child’s personality, talents and mental and physical competencies
■ ‘ethical symmetry’ and an adherence to principles mandated in the UNCRC (1989).

Results

Of the 506 articles surveyed, all categories of child status, researcher perspective and research culture were identified. Table 4 presents the number of articles categorised in relation to child status and researcher perspective. The most common child status was that of an object of research with 327 (64.6 per cent) studies, followed by 162 (32.0 per cent) studies involving children as subjects. All 10 journals published both child as object and child as subject articles. Only 15 (3.0 per cent) studies included children as social actors, these being distributed over eight journals. Only one journal published two (0.4 per cent) articles that described young children being included as co-researchers.

Table 4. Number of articles coded in relation to child status and researcher perspective (n = 506)

<table>
<thead>
<tr>
<th>Child status</th>
<th>On</th>
<th>With</th>
<th>By</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Object</td>
<td>327 (64.6%)</td>
<td></td>
<td></td>
<td>327 (64.6%)</td>
</tr>
<tr>
<td>Subject</td>
<td>28 (5.6%)</td>
<td>134 (26.5%)</td>
<td></td>
<td>162 (32.0%)</td>
</tr>
<tr>
<td>Social actor</td>
<td></td>
<td>15 (2.9%)</td>
<td></td>
<td>15 (3.0%)</td>
</tr>
<tr>
<td>Co-researcher</td>
<td></td>
<td></td>
<td>2 (0.4%)</td>
<td>2 (0.4%)</td>
</tr>
<tr>
<td>Total</td>
<td>355 (70.2%)</td>
<td>149 (29.4%)</td>
<td>2 (0.4%)</td>
<td>506 (100.0%)</td>
</tr>
</tbody>
</table>

The most common researcher perspective was research on children, with 355 studies making up 70.2 per cent of articles surveyed (see Table 4). Research with children was the second most common researcher perspective with 149 studies (29.4 per cent). All 10 journals had articles representing both the on and with categories. Particularly uncommon was research by children, with only two (0.4 per cent) studies categorised with this perspective.

Research was more likely to be conducted on children who were positioned as objects of research, with 327 (64.6 per cent) articles categorised as such (see Table 4). In comparison, research was conducted on children in only 28 studies (5.5 per cent) in which the children were positioned as subjects. For research conducted with children, 134 studies (26.5 per cent) were identified where children were categorised as subjects while 15 studies (2.9 per cent) positioned children as social actors. Research by children (two studies, 0.4 per cent) only occurred where children were positioned as co-researchers.
Table 5 presents a summary of the number of articles coded in relation to child status and respectful research culture. A respectful research culture was evident in only 52 articles (10.3 per cent), with 454 articles (89.7 per cent) making no mention of respectful approaches. Studies that positioned children as objects and subjects tended to be coded as non-respectful. In contrast, studies that positioned children as social actors and co-researchers tended to be coded as respectful.

Table 5. Number of articles categorised in relation to child status and respectful research culture (n = 506)

<table>
<thead>
<tr>
<th>Child status</th>
<th>Respectful research culture</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Object</td>
<td>320 (63.2%)</td>
<td>7 (1.4%)</td>
</tr>
<tr>
<td>Subject</td>
<td>132 (26.1%)</td>
<td>30 (5.9%)</td>
</tr>
<tr>
<td>Social actor</td>
<td>2 (0.4%)</td>
<td>13 (2.6%)</td>
</tr>
<tr>
<td>Co-researcher</td>
<td>2 (0.4%)</td>
<td>2 (0.4%)</td>
</tr>
<tr>
<td>Total</td>
<td>454 (89.7%)</td>
<td>52 (10.3%)</td>
</tr>
</tbody>
</table>

Table 6 presents the number of articles using a respectful research culture that were categorised in relation to child status and researcher perspective. This table highlights that a respectful research culture is not exclusively limited to participatory approaches. Seven studies (13.5 per cent) where research was conducted on children as objects of research were categorised as respectful. These studies were concerned with recognising and valuing the child’s experience, considering ethical issues, acknowledging children as both vulnerable and competent, minimising intrusion by researchers into the ‘everyday’ operation of the research setting, and reporting of data in non-judgemental ways.

Table 6. Number of articles using a respectful research culture that were categorised in relation to child status and researcher perspective (n = 52)

<table>
<thead>
<tr>
<th>Respectful research culture</th>
<th>Researcher perspective</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>On</td>
<td>With</td>
</tr>
<tr>
<td>Object</td>
<td>7 (13.5%)</td>
<td>29 (55.8%)</td>
</tr>
<tr>
<td>Subject</td>
<td>1 (1.9%)</td>
<td>29 (55.8%)</td>
</tr>
<tr>
<td>Social actor</td>
<td>13 (25.0%)</td>
<td>13 (25.0%)</td>
</tr>
<tr>
<td>Co-researcher</td>
<td></td>
<td>2 (3.8%)</td>
</tr>
<tr>
<td>Total</td>
<td>8 (15.4%)</td>
<td>42 (80.8%)</td>
</tr>
</tbody>
</table>

Discussion

The first intention of this paper is to ascertain how research with young children is currently being reported and to compare this with rights-based EC research literature. The second is to introduce a Rights-based Research Accountability Framework to assist researchers in moving towards rights-based participatory EC research.

Reporting of research practice

It is likely that what EC researchers choose to report does not fully reflect the care and attention afforded to the best interests of their participants. However, results of this meta-analysis indicate a significant gap between what is perceived by the EC research community as desirable research practice and how research is being reported. This omission of rights-based information from published manuscripts sends a conflicting message about a child’s right to participate with respect, ‘voice’ and agency.

Nearly 97 per cent of the 506 articles surveyed reported young children in non-participant roles as objects or subjects of research, with 70 per cent of articles reporting research on children. A respectful research culture was only identified in 10 per cent of articles. Do these results reflect a common view that research on children as objects is easier with this age group, driven by time constraints, or linked to young children’s perceived lack of competence? In terms of time, objectives and resources, not all research is suited to studies with or by young children, and not all young children will benefit from becoming co-researchers. Research from all genres will continue to be required, but it is conceivable that aspects of research practice could be adjusted to move towards a more rights-based respectful approach, especially in the area of informing and consent processes. For example, research that is conducted on children could include some form of information-sharing and researcher/child dialogue as part of a respectful research culture. To this end, a Rights-based Research Accountability Framework is introduced to assist this move to a respectful culture.

A Rights-based Research Accountability Framework

Given the wealth of theoretical literature available to researchers on the importance of rights-based research, but limited guidance available on how to achieve it, researchers may find the transition from non-participatory to participatory approaches challenging. In their international study of ethical issues in research with children, Powell et al. (2011) reported that many researchers are not aware of standards, guidelines or research requirements to ‘help guide and inform their work’ (p. 6). Critical strategic choices are required at both planning and implementation stages of research. Thus, in terms of upholding rights-based ideals, a tool that enables researchers to easily view the various dimensions of their project could help address this need. To assist in this regard, Figure 1 presents a Rights-based Research Accountability Framework based on the three dimensions of research discussed in this paper.
By comparing the attributes of child status, researcher perspective and research culture that characterise their own research, with the definitions discussed in this paper, researchers can use the framework to more easily identify how a study is positioned in terms of upholding children’s rights. Researchers can ask, ‘how are children’s capabilities viewed in this project (status)?’, ‘how have I positioned the children in relation to myself (perspective)?’ and ‘what value do I place on listening to the child’s voice, and how is this demonstrated (research culture)?’

It is also important to note that decisions about child status impact all other aspects of a research project. How the child is viewed (object, subject, social actor or co-researcher) determines whether the child holds rights in the project and to what extent the child’s existing and emerging competencies are valued. The researcher’s perspective then determines ways the child can be engaged as a participant in research practice; whether the researcher engages the child from a position of power (on), more equally (with), or lifts the child into a position of influence (by). The research culture that permeates all interactions between researcher and child participant influences the child’s ability to seek, receive and communicate information throughout their research journey. Each dimension is of value in its own right, influences each of the other dimensions and contributes to the ‘whole’.

Given that the idea of rights-based research has not traditionally been easy to quantify, this framework can act as a tool for reflection, can provide a broad indication of how well a study engages with children’s rights in research, and embraces respect, participation and inclusion. For projects still in the planning stages, the framework can assist EC researchers to design research that reflects their desired intention in a consistent, accountable and holistic manner. Referring to the framework at points throughout the research process could also assist in determining how well a project conforms to its original intentions and could serve to remind researchers of the ongoing connection between children’s rights, research methods and research ethics.

Conclusion

This meta-analysis has highlighted a gap between rights-based EC research literature and the way in which research is being reported with young children. In general, reported EC research practices are not keeping pace with significant ideological changes underpinning EC literature. Research that upholds the rights-based ideals of the UNCRC does not just happen by chance, but requires strategic choices at both planning and implementation stages of a research project. By understanding how a study is positioned in terms of young children’s status in research, the way researchers engage them and the research culture that develops, researchers can be empowered to more effectively identify, intentionally plan and implement rights-based research. The Rights-based Research Accountability Framework, used in conjunction with the explanations of its three dimensions described here, can assist in enabling holistic planning, reflection and realigning of early childhood research.

Acknowledgements

This research was carried out under an Australian Research Council Linkage Grant (LP110200756) to Christine Howitt and Léonie J. Rennie at The University of Western Australia, in partnership with Scitech and Rio Tinto Future Fund. The opinions expressed in the article are those of the researchers and should not be attributed to the funding body.

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The Professional Leadership and Action Research Training Model: Supporting early childhood leadership

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Edith Cowan University

THIS PAPER CONTRIBUTES TO the discussion on early childhood leadership, pedagogy and change management during times of intense change. The study reported was funded by the Association of Independent Schools of Western Australia (AISWA) to strengthen pedagogical knowledge and leadership capacity in teachers aspiring to be early childhood leaders. A Professional Leadership and Action Research (PLAR) Training Model, was developed by the researcher and evaluated by 17 independent school teachers who completed the study. Data were drawn from surveys, conversations, interviews, focus groups, individual action research reports, reflective journals and document analysis. At the completion of the study, the 17 teacher leaders evaluated the PLAR Training Model as ‘Excellent’ or ‘Very Good’, and validated its six elements, endorsing its capacity to strengthen leadership, pedagogy and research output.

Introduction

In the light of current international and national reforms and the growing formalisation of early childhood education, educators are in need of ongoing leadership training that targets pedagogy and curriculum and strengthens partnerships with families and communities. Siraj-Blatchford and Mannie (2006) express the importance of the quality of leadership training for early childhood educators and raise concerns about their reluctance to take on leadership roles. As part of the Australian National Early Childhood Development Strategy, the Council of Australian Governments (COAG) heightened the need to strengthen leadership and interdisciplinary practice and build a stronger early childhood professional workforce with the capacity to support children, parents, carers and communities (COAG, 2009). Still, the disinclination of early childhood educators to engage in leadership and research remains a growing concern as the sector responds to mandatory curriculum frameworks and professional standards.

Recent national early childhood reforms in Australia have led to ‘windows of opportunity’ and future pathways dependent on leadership training. The Australian Curriculum (AC) (ACARA, 2011), the National Quality Framework (DEEWR, 2010), the Early Years Learning Framework (EYLF) (DEEWR, 2009), the Australian Professional Standards for Teachers (APST) (AITSL, 2011) and the National Quality Standard (NQS) (ACECQA, 2012), prioritise knowledge of leadership, curriculum and pedagogy and the strengthening of family and community partnerships. The NQS identifies ‘leadership’ as a required Standard, unlike the APST that classify leadership as the fourth and final professional career stage, with no mention of ‘leadership’ within the first three career stages.

In 2012, the Organisation for Economic Co-operation and Development (OECD) proposed the following three areas be actioned in Australia: (1) improving qualifications, training and work conditions; (2) engaging families and communities; and (3) advancing data collection, research and monitoring. Still, low recruitment, pay levels, lack of qualified staff specifically in childcare services, diverse workforce qualifications and reluctance to take on leadership roles still exist (Ortlipp, Arthur & Woodrow, 2011). In the last decade, there has been a paucity of research and leadership training specific to family and community leadership (Muijs, Aubrey, Harris & Briggs, 2004). Of recent concern is that a small-scale study reported postgraduate university students lacked deep understanding of family and community partnerships, were trained in pedagogy and curriculum rather than family and community, and viewed themselves primarily as pedagogical leaders rather than leaders of family and community engagement (Campbell-Evans, Stamopoulos & Maloney, 2014). Models of leadership and training remain...
critical in supporting the development of core leadership capabilities and embedding a research culture that engages with families and communities (Leeson, Campbell-Barr & Ho, 2012). If the three areas proposed by the OECD are to be actioned, then qualifications and training, engagement with families and communities and ongoing research need to be strengthened.

A comprehensive review of the literature examined current models of leadership and professional learning that ranged from linear to cyclical models, emerging models of system leadership and ‘layered’ leadership approaches (Hopkins, 2007; Warren, 2009). Each model reflected some key aspect of leadership, whether it was the need for training, knowledge of the discipline, recognition of diverse socioeconomic settings, reflective practice, research, change management or willingness to move from within and outside work settings. For example, cyclical models consisted of connected pathways for continual reflection, while some professional development models were grounded in theories of learning. Warren’s model, aligned with leadership learning through its inclusion of inquiry-based learning, reflection, conversation, sharing of learning in supportive contexts and its emphasis on trial implementation. It became clear that professional models and frameworks were more likely to succeed when they supported training and practice rather than making scant reference to how leadership should look in practice (Dunlop, 2008). Theoretical and research-based studies that allow models to be tested are long overdue.

In Western Australian schools, early childhood teachers with an early childhood degree work across primary school settings, generally Kindergarten–Year 2. Current reforms require them to apply the EYLF and the NQS when working with children from birth to five years, and the AC and APST (AITSL, 2011), when working with children five to eight years. This means they need to be familiar with two mandated frameworks (EYLF and the AC), one set of Australian Professional Standards for Teachers (AITSL, 2011), and the NQS (ACECQA, 2012), unlike their primary colleagues who follow only one mandatory framework (the AC). When children aged five and six years are combined in a kindergarten/pre-primary classroom, the early childhood teacher needs to merge the EYLF with the AC, a task that is perceived as challenging. For them, change holds a leadership role. The model’s six key elements are described below.

**Element 1: Five professional learning sessions**

The five professional learning sessions (PLS) were spread across the year (March, May, August, September, November), with timelines negotiated to suit TLs’ requirements. Each PLS was followed by action research (AR) so theory could be linked to practice. Professional knowledge and capabilities relating to leadership, pedagogy and AR were introduced, reflected upon, critiqued and further explored. Building partnerships with families, communities and professional organisations remained a priority. At the conclusion of the study, TLs completed a literature review and AR report.

**Element 2: Action research in each school**

AR followed each PLS and was supported by the researcher and AISWA representative through: school and university site visits, phone, email, ICT and networking supports. This element required TLs to examine literature and evidence-based research, select a research topic approved by the school, develop a plan of actions, implement AR and complete a research report. TLs communicated with the principal, school staff, and where applicable, families, communities and professional organisations.

**Element 3: Action learning community meetings in each school**

Through ‘Action learning community’ (ALC) meetings, held at least once a term, TLs shared their professional learning with the school team and discussed AR, its implementation and assessment. Key points were documented in a reflective journal and shared with colleagues at the next PLS.

**Element 4: Group networking beyond the school**

The fourth element was initiated to strengthen confidence in TLs; to move beyond their comfort zone, support students, schools, families, communities and the profession. Some suggested networks included:
partnering with families and communities, presenting at conferences and workshops, organising monthly meetings across schools and responding to written submissions. It was hoped that developing multi-faceted approaches to networking would empower TLs to influence all levels of government and advocate for children and the early childhood profession across micro to macrosystems.

**Element 5: ICT and networking supports**
This infrastructure was considered important in strengthening TLs’ ICT knowledge and applying networking skills within and beyond school settings. An Early Years Leaders Online Discussion Forum was developed and supported by AISWA ICT consultants and the researcher to strengthen TLs’ capacity to participate in ICT.

**Element 6: Leadership and advocacy opportunities**
This element offered opportunities for TLs to showcase their leadership work through their own avenues or the following suggested pathways with researcher support: presentation of their AR project alongside the researcher; development of research posters for conferences; and a joint presentation at the Early Childhood Australia (ECA) Biennial Conference in Perth, 2012, on the findings of this research study.

The PLAR Training Model was mapped using a Program Logic Model Framework through which inputs, outputs and outcomes could be evaluated (McDavid & Hawthorn, 2006) (see Table 1). The Program Logic Model presented a clear process, TLs’ ratings and perceptions, examination of assumptions and influencing factors. The PLAR Training Model investigated TLs’ professional needs, identified activities and participants, and outcomes. At the completion of the research study, TLs evaluated the effectiveness of the PLAR Training Model, making suggestions for future refinement.

**The research study**
In 2011, a one-year research study was initiated to build pedagogical knowledge and generic leadership capacity in TLs working in AISWA schools. Four research questions were developed. This paper examines two of the four stand-alone questions, the findings of which are reported here.

1. What kinds of professional learning needs do teacher leaders perceive they have in contending with any problems relating to new reforms, pedagogy and leadership?
2. What are early childhood teacher leaders’ perceptions about the Professional Leadership and Action Research Training Model they applied in schools?

The methodology

The researcher adopted a qualitative and quantitative approach to the evaluation. This was informed by symbolic interactionism that embraces multiple voices and perspectives, and phenomenology to collect data, search for patterns, interpret data, seek understanding and evaluate the PLAR Training Model. Multiple methods (triangulation) were used to gather a rich combination of evidence-based data. A range of instruments were applied and data analysed: surveys (pre-survey, informal survey, post-survey), interviews, focus groups, conversations and document analysis (including reflective journals and action research reports).

Twenty-four TLs commenced the study, 17 finished and the remaining seven were still in the process of completion, therefore not in a position to provide post-survey evaluation feedback. This paper reports on 17 TLs—16 who worked in metropolitan districts and one in a rural school. The 17 TLs held teaching experience that ranged from three-and-a-half to 34 years practical experience in early childhood settings, with varied responsibilities such as: coordination and support for staff; leading and liaising with school personnel and parents; leading educational reforms in the school; and mentoring others during the change process.

A pre-survey was given to each TL at the commencement of the research study to address: demographic data about their training and professional development needs; and current professional knowledge of leadership, reforms and pedagogy. An informal survey was distributed midway through the study to gauge their progress. A post survey, with questions aligned to the research project, was presented on completion of the research study. Two focus groups were conducted during PLS; individual interviews were planned on five occasions for clarification of survey data, along with TL conversations.

Analysis of the content of TLs’ individual action research projects, their reflective journals and final 3000-word report, provided formative and summative data that informed the research study. Data analysis in the study was early, ongoing, inductive and emergent in its approach. Themes and patterns were grounded in the data and emerged largely through a process of inductive reasoning. Three methods (descriptive, interpretative and theory building) were used to analyse data (Strauss & Corban, 1990, cited in Maykut & Morehouse, 1994), evaluate and refine the PLAR Training Model. The study was initiated with appropriate ethical approval from Edith Cowan University and data were de-identified prior to analysis to safeguard anonymity.

The findings

This section of the paper reports on TLs’ professional learning needs (pre-survey data) and embeds the data in the PLAR Training Model as content. The data provided insight into the professional learning needs of TLs and applied across each of the six PLAR elements.

Professional learning needs

Twenty-four TLs identified training, reforms, curriculum, professional standards, support networks and managing change as needed topics for professional learning. One TL explained, ‘Each reform needs to have specific training on how the documents are required to be used and where the flexibility lays (EYLF and National Curriculum, *National Quality Standard*) (TL2). A second TL reported challenges in merging the AC with the EYLF: ‘Crossover links between Australian Curriculum and EYLF … support networks for new reforms’ (TL8). A third focused on, ‘Interpreting what the impact of the reforms is and how they will work in particular contexts’ (TL20).

The same 24 TLs prioritised strengthening of leadership capabilities, managing diverse beliefs and resistance to change. More specifically:

- How do we present this to a staff [member] who may or may not value early learning? (TL2).
- EYLF … How to convince the principal [of] the need for change and support (TL23).
- How to engage followers who aren’t receptive to change (TL8).

Twenty-four TLs identified pedagogical needs relating to how pedagogy can be reconceptualised, linked to curriculum frameworks and applied in practice. One TL suggested, ‘New thinking/strategies on how knowledge of early childhood pedagogy can fit in with new curriculum demands’ (TL18). The second revealed, ‘combining the new curriculum with the hands-on experiential pedagogy’ (TL11), while the third remained unconvinced change was necessary and sought information on ‘what research underpins the current reform changes’ (TL3). Surprisingly only one TL identified the need to partner with family and community, which remains an important reform expectation. Pre-survey data provided insight into TLs’ needs and was incorporated into the PLAR Training Model.

Evaluation of the PLAR Training Model

This section of the paper presents a post-survey evaluation of the PLAR Training Model and its six elements. The evaluators were 17 TLs who completed the study. The structure of this section begins with a rating, followed by TLs’ perceptions of the model.
Evaluation of the overall PLAR Training Model

Seven TLs rated the overall PLAR Training Model as ‘Excellent’ and 10 reported ‘Very Good’ (Figure 1). In their opinion, the model was flexible, well-structured and responsive to their needs. There was consensus that each of the six elements strengthened their professional knowledge, built infrastructure and support, promoted critical reflection, and offered opportunities through which they could lead and advocate. Here is a small, yet representative, sample of their thoughts:

The model for this course was very successful. The 6 week breaks allowed me to continue working full-time as well as continue my research project (TL8).

It was great to be able to take away what we had learnt/discussed in each session and have time to work on it back in our schools. Also great to get others’ opinions and hear their journeys (TL6).

I enjoyed the process of completing the Lit review and learning to use evidence-based research to empower my action research process (TL3).

For 17 TLs, the six elements were achievable, worthwhile and at times challenging. Three share their perceptions:

It has been a valuable journey for me this year, embarking on my changes into formal leadership. It has given me a scaffold and hearing the experiences of others has been invaluable (TL1).

Acceptance by staff because it is research based. Gaining professional knowledge. Practical component means ‘something’ is actually achieved or accomplished which practically benefits the school (TL16).

Every session offered ‘hope’ and incentives by way of support to keep the project and the ‘leader’ motivated to succeed (TL10).

The 17 participants revealed the PLAR Training Model strengthened their knowledge of leadership, pedagogy and research, and was flexible, needs-based and supportive. For two TLs, challenges were context-based. As one explained, ‘the whole program was great. My difficulties were with my school not the program. I received great support from all those involved in the professional learning’ (TL6).

Evaluation of Element 1: Five professional learning sessions

When asked to rate the overall effectiveness of the five PLS (Figure 2), six said ‘Excellent’, eight said ‘Very Good’, two said ‘Good’ and one made no comment. The 17 Tls believed the five PLS were strategically aligned and distributed evenly across the year to allow ample time for the completion of individual AR projects.

For them, the professional learning structure was supportive of their needs unlike ‘one off PLS’. Three TLs elaborated:

A structure to follow with support along the way—an excellent balance between the five professional learning sessions and school based research (TL14).

It was good having time between each session especially trying to combine working and extra load (TL9).

Topics were relevant for each stage of the project; feedback was welcomed and given openly. A total feeling of support was generated within the group (TL10).

Seventeen stated the five PLS and the PLAR Training Model strengthened their capacity to link theory to practice, apply critical analysis, engage in school and group networks, refine ICT skills and strengthen leadership and advocacy. Here is a small sample of their perceptions:

I found sessions where (Elizabeth) shared her findings and other’s research on the nature of leadership, problems of leadership and what leadership looks like especially helpful as it identified common problems/solutions and patterns of behaviour—good to know (TL7).

Network with like-minded peers and I’ve enjoyed listening to the journeys of other researchers (TL2).

Given new ideas I could use on leading change (TL5).

For one TL, time became a challenge: ‘I came away wanting to do more within the school but unable to without being given extra “Duties Other Than Teaching” time, however, inspiring to lead change’ (TL11).
Evaluation of Element 2: Action research in each school

When asked to reflect on the effectiveness of the overall AR process (Figure 3), two reported ‘Excellent’, 11 said ‘Very Good’, two said ‘Good’ and two revealed ‘Satisfactory’.

Figure 3. Effectiveness of the action research process

The initial inclusion of AR was challenging, as TLs examined literature, evidence-based research and negotiated research priorities with staff. Ongoing support was readily available through consultations and visits to schools. A process of change unfolded as TLs progressively developed the leadership capabilities required for AR. They followed a traditional AR model: articulated an issue, gathered and analysed information, planned strategies and experiences, actioned research in schools and evaluated their effectiveness as leaders. Here are samples of TLs’ thoughts:

I felt more empowered as a leader of change (TL3).
Encouraging me to go back and read up on current research—something I have continued to do independently now (TL7).
The knowledge I have gained from my research project has been valuable and will impact the way I teach my students next year (TL17).

Clearly, ongoing support was critical in guiding TLs through the AR process. Encounters varied in complexity, challenging TLs to negate gaps in knowledge and access the literature for guidance. For example:

Educating senior management and executive on the importance of early childhood education (TL3).
Getting teachers to commit time and effort was difficult because the two teachers involved worked on different days and were not always committed to spending time reading some of the research materials I provided (TL16).
Difficulty with a change of leadership, causing a dramatic change in staff collaboration (TL15).

The AR process challenged TLs to engage in reflective thinking and enhance professional knowledge:

In making me view myself as a professional with academic background was a valuable way to analyse and contribute in the context of my role in the school—very useful (TL7).
I learned more about myself and what drives me as a teacher. I was able to pass on enthusiasm in teaching to my fellow colleagues (TL8).
The research enabled me to improve my professional knowledge. It was like going back to Uni (TL16).

Evaluation of Element 3: Action learning community meetings in each school

When asked to rate the overall effectiveness of the ALC meetings (Figure 4), two said ‘Excellent’, seven said ‘Very Good’, three said ‘Good’, three reported ‘Satisfactory’, while two said ‘Poor’.

Figure 4. Action learning community meetings

The sequence of PLS and AR, followed by ALC meetings, was perceived by all TLs as valuable. They believed this combination strengthened their capacity to lead change. As one explained: ‘I was able to do well as I had spent time in research beforehand, so was able to present to staff in [a] positive light’ (TL13). A second TL reported, ‘having a research base prior to this meant I was confident in discussing the project with staff’ (TL14). This view was confirmed by three TLs:

I personally approached people and emailed. I gave teachers some say in when/how/what happened (TL5).
Determined to keep finding alternative strategies to create a positive situation and outcome. Eventually it meant appearing to [step] aside to let others lead as that was the only way they’d contribute (TL10).
I think I was quite effective in that all the full-time and support staff were very supportive and willing to assist me and were happy to see changes being adopted in the school (TL8).

Reaching shared consensus proved challenging for one TL who revealed, ‘staff felt a little overwhelmed with expectations and putting professional learning into place in the classroom’ (TL1). A second, ‘tried really hard to listen and empathise while trying not to take things personally but to develop the skills necessary to see the action research through’ (TL12). A third explained: ‘I presented research-based information and this made it convincing to a degree. Scepticism was expressed by one of the teachers due to her perception that there exists a gap between academics and practical experience’ (TL16). A fourth exclaimed there were, ‘Too many challenges! This work (all in my own time) was not valued at all. There was a very
clear shift in dynamics with the change of leadership’ (TL15).

Negating gaps in leadership and accessing support was important. One TL ‘engaged AISWA reps to support findings for school’ (TL4). Accessing a ‘critical friend’ supported their leadership journey, strengthened confidence and brought positive outcomes. In their words:

I went back and collected more evidence to back up my proposals and ideas and re-presented it (TL3).

Presenting my research clearly and in a non-threatening way. Allowing people to take ownership of what we were doing (TL12).

I felt confident when suggesting my ideas at a K–2 co-ord. meeting and at the initial meeting with [the] Head of Junior School and Dept. (TL2).

Two TLs rated this element as ‘Poor’, explaining their evaluation was not related to the structure of the PLAR Training Model but was ‘ineffective due to lack of support and school changing the direction of my research’ (TL6) and ‘resistance to change was high and support low so whilst I could articulate the change its effectiveness is dubious’ (TL10).

Evaluation of Element 4: Group networking beyond the school

When asked to rate the overall group networking beyond the school (Figure 5), five said ‘Very Good’, three said ‘Good’, three said ‘Satisfactory’, one said ‘Poor’ and five said ‘N/A’ or ‘Not involved’. The TL who responded ‘Poor’ believed her involvement was limited to her ‘school and with other teachers at the EC leadership PL’ (TL3).

The majority of TLs networked at their own pace with known colleagues. For example, one preferred to ‘have conversations with others from different schools and glean some ideas’ (TL16), a second ‘was able to inspire and give a colleague who was participating in the action research advice and ideas’ (TL17), and a third, ‘was able to present to a committee on 1 occasion and spoke to other teachers about the project on a 1–1 basis during PD’ (TL8).

Group networking beyond the school was a slow transition, as TLs reported various challenges. For example:

I found that this was very difficult because of the time. There were so many things happening that year that keeping on top of the project was hard (TL12).

My very limited skill with online communication tools and my lack of inclination to be involved in this format (TL16).

TLs’ confidence also declined when they were approached by individuals with an agenda who were more confident than they were and made their role more daunting. They faced ‘staff divisions, resistance and no interest in listening to change’ (TL15). For one TL, group networking had been ‘very unsuccessful’, seven made no comment and one responded, ‘not applicable’.

When asked to reflect on what they would do differently to improve group networking beyond the school, three TLs revealed:

Bring more ‘outsiders’ into the school to speak as authorities instead of conveying information myself (TL10).

Be more broadly prepared to share my philosophy and back up my ideas (TL1).

I probably would follow the same pattern because my other roles in the school worked well; staff supported me because of the project and its benefits to the school community (TL8).

One TL’s reluctance to continue her leadership role diminished as she accessed researcher support. Another challenged herself to network beyond the school context, experienced positive outcomes and concluded, ‘this course has re-inspired me to become more involved in the network meetings organised by AISWA/Independent Primary School Heads of Australia (IPSHA) on a regular basis. I have also tried networking with a local state school (limited success)’ (TL7).

Evaluation of Element 5: ICT and networking supports

TLs were asked to rate the overall effectiveness of their use of ICT for networking (Figure 6). Two said ‘Excellent’, five said ‘Very Good’, six said ‘Good’, three said ‘Satisfactory’ and one said ‘Poor’.

Despite a high ranking, most were still hesitant to use ICT for networking, due to limited time and training. To support TLs, AISWA set up a secure Early Years Leaders Online Discussion Forum, which provided professional learning and ongoing ICT support.

TLs did not raise criticism of the site but rather the factors that impacted on their capacity to become involved, for example, time and limited IT knowledge. Most used the site as observers, benefiting from this experience. Common responses were: ‘limited use due to my lack of time to access the site and unfamiliarity with the new technology’ (TL7); or, ‘my topic was different from others so no discussion
took place’ (TL11). Time, inadequate ICT skills and lack of confidence continued to be expressed as impediments. More specifically:

Again, it had potential; time prevented me from maximising its networking possibilities (TL10).

It was great so that we could keep in contact with others. I did not use it, however, due to time restraints and I did not feel confident (have experience) using it (TL17).

I did not participate in this as I am not a user of this form of technology (TL16).

One TL believed the AISWA discussion site was ‘useful to see others’ projects and share resources’ (TL4), while a second explained, ‘it was great to see how others were going and what challenges they were facing’ (TL6). Clearly, some TLs lacked the capacity to use ICT for networking and the confidence to become capable leaders in this area.

**Evaluation of Element 6: Leadership and advocacy**

TLs were asked to rate their leadership and advocacy role (Figure 7). One said ‘Excellent’, seven said ‘Very Good’, six said ‘Good’, two said ‘Satisfactory’ and one said ‘Poor’. The TL who responded ‘Poor’ explained her reason: ‘There is much to be done in terms of educational reforms at my current place of employment’ (TL5).

### Figure 7. Leadership and advocacy role

This element offered opportunities for TLs to take on leadership roles with researcher support. Five of the 17 accepted an invitation to co-present with the researcher at an ECA WA branch meeting; two developed posters for the ECA Biennial Conference in Perth (2012); and one presented alongside the researcher during the ECA Biennial Conference in Perth (2012).

Furthermore, eight said they presented or advocated at other events or forums, while nine said ‘No’. One explained: ‘Discussed my project with EY staff at a staff meeting and met a couple of times with Head of Primary Area meetings, leadership meetings, parent workshops, staff meetings’ (TL7). Another said: ‘Early Childhood Australia and Independent Primary School Heads of Australia (IPSHA) networks’ (TL7). A third added: ‘Parent information evenings. Led a committee to re-develop play areas and organised fundraising events [and] busy-bees’ (TL9). When asked if they would consider leading and advocating again, 12 said ‘Yes’, one said ‘No’ and four said ‘ Unsure’. No reasons were provided.

### Evaluation, discussion and conclusion

Seventeen TLs evaluated the overall PLAR Training Model, rating its effectiveness in strengthening leadership, pedagogy and research output across its six elements. The perceptions of TLs are presented in Table 2.

TLs revealed the PLAR Training Model built a more intentional and action-based view of pedagogical leadership that connected to practice, strengthened leadership and research capabilities and recognised the importance of relationship building, networking and infrastructure. Time and confidence in using ICT were documented as barriers which impacted on positive outcomes. The development of the PLAR Training Model, and close partnerships between Edith Cowan University and AISWA, afforded numerous opportunities to strengthen pedagogical knowledge, leadership capacity and reflect on career trajectories.

A study by O’Gorman and Hard (2013) reported most teachers did not see themselves as leaders, nor did they describe formal leadership training, yet were expected to lead in challenging contexts. On completion of this research study, 17 TLs perceived themselves as leaders, researchers and writers, while seven commenced a Master of Education at Edith Cowan University. Each TL endorsed the PLAR Training Model and its elements; understanding leadership was complex.

The six elements of PLAR provided a process through which TLs transitioned from one element to the next, and for many this was beyond their comfort zone. For example, TLs felt less threatened attending five PLS rather than applying AR for the first time in their school. ALC meetings within their individual school were less threatening than group networking beyond the school. ICT, networking, leadership and advocacy proved challenging, reducing TL involvement. With each challenge came the need to negate gaps in knowledge, read literature and research, network with others and lead change.

The PLAR Training Model was perceived by TLs as more than a ‘one size fits all’ model. Pre-survey data was incorporated in each element to initiate a culture of professional inquiry, generate new ways of thinking and leading, build communities of learning and opportunities for ongoing dialogue. They expressed empowerment through training and support as they enabled school staff to grow as leaders and participate in research within their school setting. AR challenged them to align theory with practice, identify factors that supported or impeded their work, and contextualise learning. Teacher leaders and school staff experienced first-hand data collection, research and monitoring (OECD, 2012) and the completion of an AR report. Throughout this process, communication between the researcher, AISWA representative and TLs was continuous, supportive and reflective of their ongoing professional learning needs.

A range of factors impacted on TLs’ capacity to lead beyond school settings and their comfort zone. Support was critical as networking was fragile and complex to sustain (Stamopoulos,
Networks were important in sharing professional knowledge and empowering TLs (Evans & Stone-Johnson, 2010). Insufficient time and knowledge of ICT and networking reduced some TLs’ confidence. By the conclusion of the study, 12 expressed a willingness to lead and advocate, one said ‘No’ and four were ‘Unsure’. In two schools, internal supports were unavailable, which led to ongoing challenges. In these instances, TLs relied on support from the researcher, AISWA consultants and colleagues. As Aubrey, Godfrey and Harris (2013) conclude, priority needs to be given to complex and diverse burdens being placed on TLs, within and beyond their work environment and with few support structures available.

Training institutions, such as universities, are accountable for the quality of training and the development of potential leaders (Clark, 2012; Mistry & Sood, 2012). The exclusion of graduates taking on leadership roles until their final career stage may signal to training institutions that leadership in undergraduate courses is not as important. For example, AITSL lists four professional career stages for teachers (Graduate, Proficient, Highly accomplished, Lead) while the NQS immediately embraces leadership from the very beginning. As schools move towards integrated services on school sites, TLs will require further leadership training as they engage in more intricate multi-professional teams and strengthen their ties with families and communities (Muijs et al., 2004; Siraj-Blatchford & Manni, 2006). An analysis of TLs’ AR projects revealed five of the 17 incorporated parents in their research, with one producing a comprehensive and ‘much needed early learning Handbook that was informative and responded to parents’ questions’ (TL9).

Models of leadership, such as the PLAR Training Model, are important in strengthening professional knowledge and leadership capabilities, promoting action research, networking, ICT skills, leadership and advocacy. Given the challenges above, nurturing leadership capacity remains an ongoing concern and an enigma for many who remain under-led.

Table 2. Teacher leaders’ evaluation of the PLAR Training Model

<table>
<thead>
<tr>
<th>Outcomes: Teacher leaders’ evaluation of the PLAR Training Model</th>
<th>Perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall PLAR Training Model</strong></td>
<td>Flexible, well-structured, strengthened professional knowledge, built infrastructure and support. Promoted critical reflection, action research and offered opportunities for leadership and advocacy. Challenges: Change in school leadership.</td>
</tr>
<tr>
<td><strong>Element 1: SPLS</strong></td>
<td>Structure of few PLS, evenly aligned and distributed across year. AR applied in schools, completion of literature review. In-depth content was needs-based. Leadership capabilities strengthened and refined through ongoing support. Challenges: Time.</td>
</tr>
<tr>
<td><strong>Element 2: AR</strong></td>
<td>Built AR in TLs’ school. Research, prioritized AR projects, applied change and completed final AR report. Initially, very challenging. AR was not as informative. Ongoing support was important. Challenges: Absence of internal supports in two schools.</td>
</tr>
<tr>
<td><strong>Element 3: ALC meetings</strong></td>
<td>Sound sequence—PLS, AR and ALC meetings supported their work and brought greater credibility, easier to convince staff. PLS content aligned well to AR and ALC meetings. Question of ‘critical friend’ for support was raised. Challenges: Reaching shared consensus due to diverse beliefs and resistance, lack of support due to changes in leadership and research direction.</td>
</tr>
<tr>
<td><strong>Element 4: Group networking</strong></td>
<td>Teacher leaders networked at own pace with fewer colleagues. Initial slow transition due to lack of confidence when faced with diversity, resistance and indifference. One teacher said group networking was “very unproductive. Few made no comment; one said N/A. Challenges: Time, internet experiences, resistance, staff divisions.</td>
</tr>
<tr>
<td><strong>Element 5: ICT and networking support</strong></td>
<td>Initially used CIV as observers, those with great ICT skills enabled more in AISWA Early Years Leaders Online Dialogue. New forum and other sources. Challenges: Limited time, inadequate ICT skills, confidence.</td>
</tr>
<tr>
<td><strong>Element 6: Leadership and advocacy</strong></td>
<td>Six TLs engaged in leadership and advocacy as co-presenters with the researcher, while two developed projects which they presented. Eight said they presented at other events/forums while nine said ‘No’. Twelve considered leading again, one said ‘no’ and four said ‘unsure’. Challenges: None.</td>
</tr>
</tbody>
</table>

**Assumptions:** Leadership capabilities, professional knowledge, leading change, knowledge of early childhood education, action research, group networking beyond schools, applying ICT (and networks), leading and advocating, policies and reforms, level of training.

**Factors: Internal and external**

- Time, leadership capacity, support structures, exposure to ICT and networking supports, confidence in transitioning from micro to macro settings, partnering with families, community, existing action research managing diverse contexts, beliefs, quality of school leadership structure, articulation of roles and responsibilities.
Acknowledgements

This research has relied on the support of AISWA, their representative Crescentia Anthony, principals of participating independent schools and the generosity and goodwill of the early childhood teacher participants. I would personally like to acknowledge the diligent work provided by Crescentia Anthony, who sadly passed away in 2013.

References


Introduction

International recognition of the importance of science in early childhood education has grown in recent years (e.g. DEEWR, 2009; DfE, 2012; OECD, 2012). Despite this interest, there are well-established and ongoing concerns about the quality and quantity of science teaching. The generalist nature of early childhood teaching, along with teachers’ low confidence in their background knowledge and ability to teach science, has contributed to missed opportunities for children’s science learning (Harlan & Rivkin, 2012; Murphy, Bianchi, McCullagh & Kerr, 2013). These missed opportunities are concerning given the authentic learning context that science provides for nurturing the natural curiosity that young children have for the world around them. Moreover, science inquiry provides opportunities for teachers to teach in ways that are aligned with prevailing early childhood pedagogies such as inquiry and play.

To optimise science-learning opportunities, there is a need for a focus on pedagogical approaches to teaching science in early childhood. Such a focus has been found to assist teachers to develop confidence and competence to teach science (Harlan & Rivkin, 2012). While there have been some curriculum materials focusing on science teaching pedagogy in primary schools (e.g. Australian Academy of Science, 2013), similar resources are not readily available for prior-to-school contexts. Children’s literature, however, is prevalent in early childhood and the importance of reading and story are entrenched in teaching practice (Winch, Johnston, March, Ljungdahl & Holliday, 2010). Winch et al. (2010) describes the potential of the speculative nature of children’s literature for generating I wonder experiences, which may provide a means of capitalising on early childhood teachers’ familiarity with children’s literature to provide thematic links for science inquiry.

The use of children’s literature for science-specific learning is not new (Sackes, Trundle & Flevares, 2009); however, its use has largely focused on developing children’s science conceptual knowledge. A concern about using children’s literature in this way lies in the selection of a book that accurately represents science conceptual knowledge (Sackes et al., 2009). This concern stems from the many examples of children’s literature that contain misrepresentations of science due to the tendency of these texts to include fantasy, inaccurate illustrations and anthropomorphism (Sackes et al., 2009).

While misrepresentations of science in children’s literature are not an issue per se, the traditionally low levels of teachers’ background knowledge may hinder their ability...
to recognise and address any misconceptions that do arise. One way of addressing this concern is to consider pedagogical approaches that use children’s literature not as a source of scientific concepts, but rather, as a springboard into potential science inquiry learning. This paper explores such a role for children’s literature to support early childhood teachers to effectively integrate science through familiar play and inquiry pedagogies and thus may address some of the issues raised in the literature. The study informing this paper is also outlined and the findings are used to inform a model for teacher practice.

Science inquiry and play pedagogies

The prevalence of play pedagogies in Australian early childhood education settings (DEEWR, 2009) appears to offer a range of opportunities for children to engage in science inquiry. Contemporary theorists describe the learning that occurs in play learning environments as culturally determined and influenced by the experiences, identities and abilities of the participating children (Wood, 2010). Further, this learning cannot be separated from the social and cultural context in which it occurs. Such a theorisation of learning through play offers a bridge to science teaching through the parallel acknowledgment of the importance of the characteristics of experience, identity and ability in the social and cultural learning environment. They mirror the meaningful context for science inquiry, which in contemporary research is also informed by sociocultural theory (Tytler, 2007). The bridge thus builds its link from the current pedagogical content knowledge and practices of early childhood teachers (in which they have confidence) to the less familiar territory of science inquiry by reflecting a shared theoretical platform.

Recognition of this bridging is important because of the potential it holds for developing teachers’ science inquiry skills. Other synergies between play and science inquiry include play pedagogies focused on developing vocabulary, communication and social development that are commensurate with the science inquiry skills of questioning, predicting, investigating, analysing, explaining and communicating. There are also a number of general literacy practices that emerge through play that link to science inquiry, for example, negotiation, sharing information, discussing and sharing problems and solutions, reasoning, explaining, suggesting and questioning (Fellowes & Oakley, 2010). This further demonstrates how play pedagogies provide affordances for science inquiry. Campbell and Jobling (2010) highlight how these and other characteristics of learning through play, such as creativity, abstract thinking and exploration, are aligned with the skills and behaviours associated with science inquiry. These synergies may provide a way to think about science inquiry in early childhood settings where children’s literature provides the source of contextual themes for science learning, and play provides the pedagogy for its implementation.

Edwards, Cutter-Mackenzie and Hunt (2010) describe a pedagogical framing involving three forms of play: open-ended, modelled and purposeful play. Open-ended play is self-directed, where children are free to select from available resources related to a particular concept and use them in unstructured ways. This is similar to the open student-directed discovery learning that is a feature of student-directed investigation in science. Modelled play occurs when teachers demonstrate or model how particular resources might be used to explore certain ideas, a strategy that is also adopted in science education through teacher demonstration. Finally, purposeful play, which reflects scaffolding in science teaching, involves teacher interactions with children to support learning. It is commensurate with Vygotsky’s (1978) zone of proximal development, which is rooted in sociocultural theory. Thinking about the use of children’s literature to provide contextual themes that are then explored through these three forms of play may assist teachers to develop confidence and competence to recognise and implement science inquiry.

Theoretical perspective

This study was framed using a sociocultural theoretical perspective, which acknowledges and values the learning that occurs through interactions in social and cultural contexts (John-Steiner & Mahn, 2011). Sociocultural theory is appropriate in the current study because it aligns with contemporary thinking about play and science learning. John-Steiner and Mahn (2011) describe three tenets of sociocultural theory that were important to this study. The first describes a process where learning occurs through interactions and relationships with more experienced others. Consideration of these ‘social sources of development’ (John-Steiner & Mahn, 2011, p. 192) was important because the relationships and interactions between teacher and researchers, and teacher and children, provide opportunities for understanding early childhood teachers’ use of children’s literature in the preschool setting. The second tenet refers to semiotic mediation, or the use of tools and mechanisms as mediators in the co-construction of knowledge. In this study, children’s literature was used as a springboard for science inquiry play. Through ‘socially developed semiotic means’ (John-Steiner & Mahn, 2011, p. 193) an early childhood teacher was supported to use children’s literature to recognise and plan for science inquiry. The third tenet describes the process as opposed to the product of change. This historical aspect of sociocultural theory, described by John-Steiner and Mahn (2011) as genetic analysis, was important in the present study because it draws attention to changing conditions and opportunities for children’s literature to be used as a springboard for science inquiry play in the preschool setting.
Project overview

The study was conducted in a four-year-old preschool educational setting, with a view to providing insights that might inform approaches to science inquiry learning in wider early childhood contexts. The aim of the project was to explore the use of a range of children’s literature as springboards for recognising and implementing science inquiry play experiences in an early childhood preschool setting. This led to the research question:

How might an early childhood teacher use the established context of children’s literature to recognise and implement science inquiry through play?

Drawing on the main themes in the literature, an early childhood teacher was supported to use the established context of children’s literature to recognise and implement science inquiry play. The researchers supported the teacher in a number of ways including: providing a range of children’s literature for the teacher to select from; assisting with the development of an inquiry question relevant to the selected topic and book; helping to generate ideas for science inquiry stemming from the selected book; and aiding the identification of appropriate resources to provide for children’s play. The influences of this experience on the teacher’s confidence in her/his ability to teach science were explored. In achieving this, it was important to the researchers that they work closely with the teacher in a participatory research approach. A participatory approach acknowledges that teachers best know their children and the teaching context in which they are working (Howitt, 2011), and how to align this with the sociocultural theoretical perspective framing this study.

The design

This case study took place in a four-year-old preschool setting in Victoria, Australia with an experienced preschool teacher and a class of 27 children. A narrative approach was used to capture the individual experiences and subsequent ‘meaning of those experiences’ (Creswell, 2007, p. 55) for the early childhood teacher. This approach was used because of the insights into the human experience that may be offered through the use of multiple lenses in the re-storying process associated with narrative enquiry (e.g. Lodico, Spaulding & Voegtle, 2010). The study was limited to a single preschool class and teacher (pseudonym Janet), thus creating a ‘bounded system’ (Denzin & Lincoln, 2005, p. 444) upon which the science inquiry play context for learning was applied.

A different inquiry theme was introduced each week for four weeks and learning experiences associated with each theme remained as part of the play, as long as children maintained interest. Children attended three preschool sessions per week and each session contained one to two hours of open play.

A book was read to introduce each new theme. After reading and discussing the story, the children chose from a range of available play experiences, one of which had an explicit science inquiry focus that linked to the theme of the book. Table 1 shows the selection of books, inquiry questions and learning experiences provided over the four-week period.

Multiple sources of data were collected in the study including: multiple semi-structured teacher interviews (TI);

Table 1. Selection of literature, inquiry question and play experiences

<table>
<thead>
<tr>
<th>Children’s literature</th>
<th>Science themes</th>
<th>Inquiry question</th>
<th>Play learning experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Tobias blow</em></td>
<td>Forces/Wind/air</td>
<td>How can we move the air to make things go?</td>
<td>The effect of air/wind on materials of different shapes and weights and using mechanisms to move them (e.g. straws, bubbles).</td>
</tr>
<tr>
<td><em>Zacharey Jane and Rosalie Street</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>A day with the animal doctors</em></td>
<td>Staying alive</td>
<td>How do we look after living things?</td>
<td>Vet corner with resources for play including stuffed animals, doctor’s kits, x-rays, patient bed and bandages.</td>
</tr>
<tr>
<td><em>Sharon Rentta</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Twinkle twinkle little star</em></td>
<td>Light and dark</td>
<td>How does the light and dark change what we see?</td>
<td>Dark box with luminous stars/planets and shadow torches; overhead projector with translucent coloured shapes, shadow puppets and cardboard templates of items from the story.</td>
</tr>
<tr>
<td><em>Kate Toms</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Grandpa’s inventions</em></td>
<td>Design and creativity technology</td>
<td>What ‘latest and greatest’ invention can you create?</td>
<td>Certificates adapted from the book to encourage children to use craft materials to create their own invention.</td>
</tr>
<tr>
<td><em>Richard Johnson</em></td>
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</tr>
</tbody>
</table>
researcher observational notes (RON); and teacher reflective journals (TRJ). Digital video (DV) of children playing was an additional source of information used to enhance richness and context, confirm observations and ‘thicken description’ (Riessman, 2008, p. 179).

The holistic tenets of narrative inquiry were maintained through keeping the participant story intact. A thematic approach to data analysis was then applied to the narrative to gain insights into the research question. Using a thematic approach, the three play pedagogies described by Edwards et al. (2010)—modelled play, open play and purposeful play—provided the lens for analysing ways in which science inquiry emerged through play, and subsequently, ways in which children’s literature was a springboard for science inquiry. Framing play using these pedagogies was important for this study because it provided a link to sociocultural theory, through recognition of ‘social sources of development’ (John-Steiner & Mahn, 2011, p. 192).

Findings and analysis

The findings of the study are presented in two sections: (1) an example from a selected theme, ‘Staying alive’, which uses the narrative to illustrate ways in which science inquiry play was developed by Janet and experienced by the children; and (2) an overview of Janet’s experience to highlight the influence of the study on her familiarity and confidence to recognise and implement science inquiry experiences in an early childhood setting. The findings are presented using the three types of play described by Edwards et al. (2010): open, modelled and purposeful play to illustrate how Janet used the contextual themes provided by the children’s literature to foster science inquiry.

Modelled play

At the initial session of the ‘Staying alive’ theme, Janet introduced the inquiry topic to the children by showing them different objects from a medical prop kit. Items included a stethoscope, thermometer, syringe, sphygmomanometer, bandages and medicine bottle. The children recognised a number of items in this activity, including the stethoscope, a term they were able to pronounce correctly. The discussion generated from this activity focused on the use of the different medical instruments, family pets and visiting the vet (R2ON). This discussion led to the reading of the book (see Table 1). As Janet read the book she found that the children engaged in dialogue about events in the story and the illustrations (R2ON). These initial observations showed how children were learning about language and literacy in context, through the introductory discussion generated from the medical prop kit and through the dialogue that occurred during the book’s reading. On the second day of the ‘Staying alive’ theme, Janet re-read the book to the children, and again, drew their attention to relevant conceptual information (i.e. the use of a stethoscope to listen to the main character’s heartbeat). The manner in which Janet integrated the reading of the story with the discussion and presentation of items from the medical prop kit were indicative of Edward et al.’s (2010) modelled play. The story provided an important impetus for both the focus and the timing of the discussion around different items, providing a connectedness between the story and the play to come. The story and the modelled play also provided an impetus for aspects of science inquiry. At this stage the ‘I wonder’ aspect of science inquiry was encouraged through the curiosity that was aroused by the medical prop kit items. Science language and ideas were also introduced as Janet and the children named the different medical items and discussed their purpose.

A further example of modelled play occurred on day two when a parent helper entered the vet corner, which had been set up in connection to the theme, and encouraged the children to talk about how the animals obtained their injuries. One child indicated that the cat hurt its tail and the parent helper related this to a real-life experience, stating: ‘I knew a cat that hurt his tail and it was never straight again. How did this cat hurt its tail?’ (R1ON). This led to the children telling stories about how the animals got hurt. When it was almost time to pack up, the parent modelled how it is easier to put bandages on if they are first rolled up and then unrolled across wounded areas on the toy animals. Very soon the children were rolling up the bandages and unrolling them across tummies and around arms, legs and heads of animals. This modelling and discussion provided a connectedness to the real world. The discussion and demonstration of using the props and the representation of their use in the story provided a structured modelling of how these items could be used in play.

Open play

During open play, Janet put the book in the vet corner so the children could access it during their play. Inside the vet corner there was a large bed, a couch, two medical prop kits, disposable gloves, a range of soft animal puppets, animal x-rays, surgical gowns, a desk with a mirror and keyboard and some dress-up outfits. On the first day of the cycle there were up to five children in the vet corner at any one time. Children took items out of the medical prop kit and explored their use. Typical comments and questions included: ‘What is this?’, ‘What does it do?’, ‘Do you know what these are?’, ‘There’s another one like it’ (DV1_Mar13). The children were particularly interested in wearing the disposable gloves and exploring the use of the medical prop instruments. Some children tried using the bandages and prop instruments with the animal puppets but this was not sustained. The children’s questions demonstrated their engagement in science inquiry skills where they described what they were doing and asked questions about the names and use of different equipment, demonstrating curiosity, questioning and investigating techniques to discover answers to their wonderings about their play scenarios.

On the second day, open play commenced with one of the children typing on the keyboard. When asked what she was...
doing, she said she was ‘making appointments’ (R1ON),
modelling the story where the vet receptionist also took
patient bookings. Other children chose animals to care for and
discussed particular roles they could each take on (e.g. Doctor).
Mollie then opened the medical kit and began to remove prop
medical supplies to tend to a kitten who ‘wasn’t feeling very
good’ (DV2_Mar13). The children busily took prop instruments
and supplies out of the medical prop kit, placed bandages on
the toys and explored the various uses of the prop instruments
on the soft toy animals.

The interactions that occurred in the various dialogues in
the vet corner showed children engaged in science inquiry
skills. For example, context-specific science concepts were
integrated into the open play through children’s conversations
focused on identifying instruments in the medical prop kit
describing the ailments of the animals used in their play,
demonstrating links to the science of living things, illnesses,
diagnoses and treatment. These links to science were also
evident through children’s exploration and discussion of the
use of the medical prop instruments on one another where
the context of the human body emerged. Science-specific
vocabulary was explored through investigation as evidenced
by discussions regarding ‘temperature’, ‘thermometer’ and
different parts of the body.

**Purposeful play**

After an initial period of open play, Janet entered the play centre
and engaged with the children. On day one she encouraged the
children to use the animal puppets in their play, and explained
the use of some of the instruments that the children were
using. Below is the transcript of a conversation Janet had with
one of the children:

**Setting—Hannah struggling to put a bandage on a puppet**

Janet:  
How about you put a bandage around his tummy
like this. That’s it … wind it around this way.

Hannah:  
What’s this for?

Janet:  
That is for looking in the ear, or finding out how hot
they are. It’s for taking the temperature.

(Hannah puts the thermometer in the puppet’s ear)

Hannah:  
He’s not good.

Janet:  
What’s wrong with him? Is he too hot?

Hannah:  
Yes.

Janet:  
Well if he’s too hot then it means he is sick.

Hannah:  
Yes. (Hannah finishes putting the bandage on.) He’s
fixed.

Janet:  
Well done. That will fix his sore tummy (DV1_Mar13).

Building on her observations from the first session, on day
two Janet added some real bandages to the vet corner and
replaced the animal puppets with stuffed animal toys. Janet’s
rationale for replacing the animal puppets with stuffed toys
was that these full-bodied toys could be used more effectively
in the children’s vet play (R1ON). Janet’s reflections from the
first session supported this decision as she noted that the
children lost interest in the vet corner as they were limited in
how they could use the puppets in their vet play (R1ON). This
demonstrated Janet’s intention for further purposeful play as
she scaffolded the learning environment in response to the
children’s needs and interests.

When Janet joined the vet corner on the second day she began
interjecting throughout the children’s play with scaffolding
questions including: ‘What’s wrong with the bunny?’, ‘Is he
still breathing?’, ‘How will you know?’, ‘What’s wrong with
the rabbit’s paw?’, ‘How did it happen?’ (DV2_Mar15). These
questions prompted children to provide descriptions and
explanations for their imaginary play.

Before leaving the vet corner Janet had an extended dialogue
with Amelia who was using the oxygen mask with her soft
toy dog:

Janet:  
What’s this doing? What is it for?

Amelia:  
It makes him better.

Janet:  
It helps him to breathe.

(Sally listens to the kitten’s heart with the stethoscope)

Janet:  
Is he all right? Is his heart working?

Sally:  
Yes it is (DV2_Mar15).

After Janet left the vet corner, the children continued to play
in a similar manner. There were three to eight children in this
area for the 45-minute session.

Children’s science inquiry skills were developed through the
purposeful play as they collected evidence of illness and
made links between imaginary cause-and-effect scenarios.
They offered explanations for these scenarios in answer to
Janet’s questioning; for example, how the use of the bandage
would fix a particular ailment. The science inquiry skills of
investigating, analysing, reasoning and explaining all emerged
from these play scenarios.

**Summarising the play**

After two days of observations in the vet corner, there were
changes in the interactions and dialogue of children’s open play.
On day one, the children explored the identification and use
of the medical prop instruments. On day two, they continued
with this behaviour with the new soft toys that Janet had
placed in the corner, but with extended dialogue. This extended
dialogue seemed to be stimulated by the scaffolding strategies
that Janet demonstrated both during the modelled play when
re-reading the book and through the purposeful play achieved
through intervention where she provided alternative resources
and prompted children to consider a diagnosis and cause for
the toys’ ailments. Here Janet scaffolded the science inquiry
learning by drawing children’s attention to specific conceptual
information within a meaningful context.

The adult interactions, with both Janet and the parent who
entered the play, led to the children telling stories about
their toy animal’s injuries and making connections with personal experiences of visiting the vet. These examples of play, together with the reading and re-reading of the story, provided connected, supporting and enabling social contexts for enriching and extending language and literacy learning experiences in similar ways to those described by Beecher and Arthur (2001), where the role of the adult in scaffolding the process was paramount. Children’s science conceptual knowledge was also developed within the context of the body, diagnosing for illness, health and care for living things. The focusing inquiry question and scaffolding questions used throughout the play were important in providing this conceptual development, reinforcing Fleer’s (2010) assertion of the importance of conceptual as well as contextual framing for successful science learning through play. Science inquiry skills of questioning, wondering, describing and answering questions were also developed along with context-specific terminology and the fostering of early ideas about cause-and-effect. These skills are representative of the science inquiry skills that have been identified as potential sources of science exploration through play (Harlan & Rivkin, 2012). Here they emerged through a combination of modelled, open and purposeful play.

Teacher’s familiarity and confidence to plan and implement science inquiry

The initial interview with Janet revealed that she felt reasonably confident in her ability to plan science-based learning, although, as shown in the excerpt of her initial interview below, this came after some reflection on the idea of what science is:

*I was never very good at science but when I was talking to [researcher 1] I realised well science is in so much that we already do like in cooking … and in stories like the very hungry caterpillar … When I reflect on it that way I feel much more confident* (TI_Mar1).

Janet also thought the linking of science to children’s literature was promising, stating that ‘children need a little something to switch them on, to give them the connecting link’ (TI_Mar1), which she thought the book would provide. She also noted ‘it’s not easy to pull science out of the [Early Years Learning] framework’ (TI_Mar9). Over the course of the study, the researchers noted that the book went from being read at the beginning of each cycle according to the plan, to reading it at the beginning of each session. When queried about this, Janet responded:

*It was really nice reading a story at the start … and then in later sessions re-reading, or really talking about what we had read last session helped remind them. We talked about the pictures [illustrations] to remind them about the tables [play centres] (TI_Mar9).*

She also noted that beginning each session with a story was an effective means of settling the children and it enabled her to focus on different parts of the story and emphasise different concepts during the repeat readings.

The book also assisted the scaffolding process where it was made available during child-directed play. In one example, when exploring the theme of forces and wind through the book of *Tobias blow*, children pointed out the character in the book blowing tissues and Janet responded by adding tissues to the learning centre (RON2_Mar8). The teacher reported later:

*It’s [children’s literature] a nice guide and you feel like you’re incorporating a couple of things [from the book] (TI_Mar9).*

Janet noted how the book provided a connectedness between different activities children had available that was not usually present.

One of the areas of reflection encouraged in the teacher journal was on the possible science learning opportunities that could be linked to the story. Janet was able to identify a number of science teaching and learning possibilities. For example, in identifying science inquiry skills, Janet highlighted children’s engagement in ‘expressing ideas, discussing with each other’ (TI_Mar9) and ‘problem solving, comparing ideas, and lots of communication and negotiation’ (TI_Mar26). She also identified science conceptual learning of weather, the relationship between wind and movement, that living things need the same care that we do and how to join different materials and consider what works and why (TRJ entries).

As time progressed, Janet was able to identify an increasing number of themes to connect science to the children’s literature. For example, for the first two books only one to two initial science connections were identified. In the last two books Janet was able to generate three initial ideas, and after experiencing the teaching and learning, she suggested up to five further possible connections to science. Furthermore, the possibilities Janet generated for these later books were thematic rather than literal links to science concepts. For instance, using the book *Twinkle twinkle little star*, Janet suggested possible science links of exploring shadows, magnification and tracing silhouettes. It was interesting to see this evidence of thematic thinking given that in her final interview Janet reported, ‘I think the literature needs to be fairly factual’ (TI_Mar26), suggesting that at the conscious level she believed literal links to science concepts were important, but on a subconscious level this was not the case.

Conclusion and implications

Janet’s experience of using children’s literature to recognise and implement science inquiry play indicates its potential for inspiring science inquiry in early childhood preschool settings. Janet’s use of children’s literature to establish themes for science inquiry play provided contextual framing for the science inquiry, and the findings highlighted that science inquiry skills were evident in the open, modelled and purposeful play that these contexts provided. Fleer (2010) identified the importance of considering contextual framing for science concept formation in contemporary play pedagogies, and the findings of this study extend this idea by suggesting that contextual
Figure 1. Children’s literature as an invitation to science inquiry: A model for early childhood framing may also be important for science inquiry. There is also some correlation between these findings and those by Murphy et al. (2013) where it was found that the use of books in primary science inquiry lessons ‘provided a context for developing thinking’ (p. 183). In the four-year-old preschool setting of this study, it would seem that Janet’s use of children’s literature provided a context for developing thinking skills associated with science inquiry. It was anticipated that the children’s literature might provide I wonder experiences for children as described by Winch et al. (2010). However, the I wonder experience seemed to be more important for the teacher as it provided opportunities to establish the themes that could be drawn upon to provide contexts for science inquiry. There is also some indication in the findings that the use of children’s literature was invitational in providing contexts
for science inquiry play. It was expected that the children’s literature would provide a springboard to initiate Janet’s ideas for science inquiry. However, it appeared to provide more than a point of initiation, as Janet used it continuously in open, modelled and purposeful play as an allurement to engage with science inquiry ideas. Thus, the use of children’s literature was as an invitation to, rather than as a springboard for, science inquiry in the preschool setting. The findings suggest that viewing children’s literature as an invitation to science inquiry in early childhood education offers a way for early childhood teachers to use children’s literature in a thematic rather than a literal manner, and thus addresses some of the concerns about the use of children’s books for science concept development highlighted by Sackes et al. (2009).

The use of children’s literature as an invitation to science inquiry in early childhood education presents an opportunity to take early childhood teachers from the known familiarity of children’s literature to the unknown or lesser-known area of science in a supportive manner, and thus addresses concerns regarding early childhood teachers’ lack of confidence and knowledge of science that leads to missed opportunities for science learning (Harlan & Rivkin, 2012). Further, these findings provide insight into how early childhood teachers may be supported to develop confidence and competence to teach science inquiry. Janet’s increased ability to recognise links to science inquiry over time suggests that ongoing experience in identifying science themes from children’s literature may assist teachers to recognise opportunities for science inquiry. This process may also be linked to increased efficacy in recognising and implementing science inquiry play and supports findings from other studies that report teachers’ increased confidence in teaching science when working with their strengths (Howitt, 2011). It can be anticipated that a study of longer duration would provide more conclusive evidence as to whether it is increased experience that leads to improved confidence or whether the particular books used provided familiar topics, thus allowing for greater creativity and confidence in planning. Janet stated that the book needed to contain factual science concepts; however, the possibilities she was generating for the chosen books were thematic, suggesting an unconscious shift in this belief and perhaps in her pedagogy. Further research within a longer time frame is needed to establish whether this shift does in fact exist and become a part of the teacher’s conscious awareness. The model for children’s literature as an invitation to science inquiry (Figure 1) is recommended for further researching on the merits and potential of this approach.

References
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Early Childhood Australia (ECA), a non-profit advocacy organisation for children birth to eight years, is seeking to expand the AJEC Committee for the Australasian Journal of Early Childhood (AJEC).

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- have experience in publishing in academic journals
- provide evidence of scholarship and/or experience in research
- contribute to the review and refereeing process
- participate in AJEC Committee teleconferences—up to three–four times a year
- demonstrate expertise in working in the online environment
- demonstrate awareness of international, cross cultural and/or Aboriginal and Torres Strait Islander early childhood issues.

Membership of the AJEC Committee:

- The AJEC Committee will have ten members including the Deputy Editor and the Editor in Chief.
- The Committee will contain at least six members based in Australia with an attempt to gain geographic spread across Australia. At least two members will be based in Australasia, outside of Australia.
- The Editor in Chief must be based in Australia.

Appointment and Terms of Office of AJEC Committee:

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- Call for EOI for AJEC Committee membership will be made in AJEC from time to time.

Persons interested in joining the AJEC Committee must submit an expression of interest to the Publications Committee. All applications due 22 February 2016.

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Introduction

The past decade, 2005–2014, has been dedicated to the United Nations Decade of Education for Sustainable Development (UNESCO, 2014). This initiative aimed to ‘mobilize the educational resources of the world to help create a more sustainable future’ (p. 1). While educational resources for sustainability have been forthcoming in the primary and secondary schools, early childhood (EC) education has been slow to implement sustainable practices (Elliott & Davis, 2009). However, since 2009, significant innovations in Australia to promote sustainable practices in early childhood settings have been implemented. Based on evidence that children’s early experiences impact significantly upon learning and development over the lifespan (Heckman, 2006), all Australian governments agreed to implement a National Quality Framework for early childhood in 2009 (ACECQA, 2011). This framework includes the National Quality Standard (NQS) (ACECQA, 2011), which requires EC educators to take an active role in caring for the environment by supporting children to ‘become environmentally responsible and show respect for the environment’ (p. 107).

Alongside these changes during the past two decades, Australian children’s health has been in the spotlight owing to increased overweight levels. In 1995, 21 per cent of children aged between five and 17 years were considered to be overweight, rising to 25 per cent in 2008 (ABS, 2009). For four-year-old children, data from South Australia indicated an increase of 7.5 per cent from 1995 to 2002 in overweight and obesity rates. While there are no definitive reasons for this trend, some explanations that have gained traction include: children’s more sedentary lifestyle being linked to increased screen time and less physical activity (Edwards, Skouteris, Rutherford & Cutter-Mackenzie, 2012); children consuming more foods high in fats and sugars (Albon, 2005); and promotion of the consumption of overly processed (and often unrecognisable) foods (Pollan, 2008). Alarmingly, research from Canada (Geoffroy et al., 2012) has indicated that children in EC centres are more likely to be obese compared to those cared for by parents at home. It is unclear why this is. Farquhar (2013) suggests two possible reasons: first, it may be due to parents being ‘time poor’ in their food choices, based on the assumption that healthy food takes longer to prepare; and second, there is a lack of understanding by parents about healthy food choices. Like Canada, Australian children are also spending more time in EC centres; up by 33 per cent from 2004 until 2012 (DEEWR, 2013).

In addition to the inclusion of environmental education in the NQS (ACECQA, 2011), there is a requirement for EC centres to have policies and procedures on nutrition and food for children that promote healthy food choices.
consistent with the Australian Government Dietary Guidelines (NHMRC, 2013). Where parents provide food for children at EC centres, educators are to promote healthy food choices and ensure food is consistent with advice provided by parents about individual children’s ‘likes, dislikes, cultural and other requirements’ (ACECQA, 2011, p. 65). The purpose of this study was to investigate how EC educators implement healthy eating policies with children, and at the same time, promote sustainable practices in EC centres in the Australian context when parents provide the child’s food.

**Early childhood sustainable practices**

Early childhood centres have a significant role to play in building children’s capabilities and understanding around sustainable development (Davis, 2010). Sustainable development is defined as ‘development that meets the needs of the present without compromising the ability of future generations to meet their needs’ (WCED, 1987, p. 87) and is viewed as dynamic, variable in contexts, and has environmental, social, economic and value dimensions (WCED, 1987). This paper concurs with this definition of sustainable development and takes the eco-centric perspective of EC sustainability education which values the environment for its own sake, in contrast to the anthropocentric perspective of valuing the environment for human enjoyment (Cutter-Mackenzie, Edwards, Moore & Boyd, 2014).

When educators support children to care for the environment, this demonstrates that environmental education is a ‘legitimate societal concern’ (Hart, 2003, p. 18) and encourages children to be socially responsible (ACECQA, 2011). Embedded within the NQS is Australia’s first early childhood curriculum framework: the *Early Years Learning Framework* (EYLF) (DEEWR, 2009). In the EYLF, daily sustainable practices are identified to be approached holistically to engage children and all stakeholders, including families, staff and the community.

This requires EC educators to behave as role models and to have knowledge about environmental issues and reflect on their educative role with children and families (Siraj-Blatchford, 2009).

But embedding a holistic approach to sustainable practices has been found to have barriers, one being educators’ knowledge about the environment. An Australian case study of an early childhood centre, Campus Kindergarten (Campus Kindy), described by Davis (2005), illustrated how a holistic approach to create a culture of sustainability and implement sustainable practices can occur. In this case study, creating a culture of sustainability required time and was underpinned by a philosophical approach to practice, similar to that described by the EYLF (DEEWR, 2009). However, there were barriers to implementing change towards more sustainable practices: one being the varying levels of educators’ knowledge regarding environmental education, which meant that change was slow, incremental and at times not prioritised by educators. A similar finding in Sweden identified that EC educators had significant gaps in their knowledge about sustainable practices (Arlemalm-Hagser & Sandberg, 2011). A second barrier at Campus Kindy was the parents’ attitude to sustainable practices. When Campus Kindy staff tried to introduce ‘litterless lunches’, where there was no waste from foods brought to the centre, educators were met with strong resistance by some families (Davis, 2005, p. 50).

**Food in early childhood centres**

In Australian EC centres, educators are required to devise and implement healthy eating policies and procedures, in consultation with families and professionals. EC educators are not nutrition experts. They access advice from health experts for their policies and procedures. In Australia there are free government programs based on the Australian Dietary Guidelines for Children (NHMRC, 2013) that support EC centres in this pursuit, which use the bio-medical approach to viewing food as a necessity for life and health requirements (Albon, 2005). Policies may also outline how some foods are more welcome than others, such as non-processed foods (Edwards et al., 2012).

In spite of advice from governments, there are conflicting values around food. Albon (2005) argues that understanding parents’ decisions regarding food choices requires examination of the cultural context and the role that food plays in the family. Parents learn their child’s likes and dislikes and respond by providing foods that they know their child will eat. Food also has a strong emotional influence as parents may be anxious about their child’s eating and/or feel guilty about their child being in care. They may use food as a substitute for their attention, as reinforcement for behaviour, or to keep the peace (Albon, 2005).

Children may enact agency over the food (Dixon & Banwell, 2004) and influence parents’ decisions at the supermarket. If a child repeatedly does not eat what is provided in the lunchbox, then parents will likely choose foods that are favourable to the child. Busy and/or tired parents may choose foods that take less time to prepare and are more convenient—these foods often have more packaging. Two separate studies that tried to introduce package-free lunches—one in Canada (Trotter & Lentini, 2011) and one in Australia (Davis, 2005)—found that parents resisted compliance with providing litterless lunches for children, citing reasons of inadequate time and convenience and that the request was unreasonable. However, the Canadian study found that children had some agency and influenced parents’ actions, owing to the children’s environmental education at school.

Children often compare their food to that of peers, demonstrating that food can be a symbol of status and power (Albon, 2005). Packaged food attains this status especially when linked with a label demonstrating popular culture, as seen at the movies or on television, for example, *Ben 10™*
Practising sustainability is not only a requirement of the NQS but has been described as an ethical issue by Early Childhood Australia (ECA), Australia’s peak EC advocacy organisation. In ECA’s Code of Ethics, educators are encouraged to ‘work with children to help them understand that they are global citizens with shared responsibilities to the environment and humanity’ (2009, p. 3). Children are encouraged to be socially responsible, have agency and develop responsibility for others and the world. To do this, curricula need to make connections between food and environmental sustainability (Elliott, 2007). This approach supports the development of awareness of the interdependence of living things as identified in the EYLF (DEEWR, 2009). Hart (1992) asserts that children have capacity for participation and decision making in curriculum and practices. Therefore a holistic approach where children enact agency and involve all stakeholders makes ethical, social and environmental sense.

Implementing a program in an EC centre where children have agency for decision making for healthy eating and sustainable practices, provides challenges. Educators require knowledge about healthy food and sustainable practices that bring about children’s sense of social responsibility and environmental awareness. Research reports that educators have been lacking in this knowledge and struggle between their roles and responsibilities for children’s health and wellbeing, implementing sustainable practices within the EC centre and respecting and valuing parents’ decisions about food choices for their child’s lunch. To understand how educators work with families requires consideration of multiple perspectives of the stakeholders (Rogoff, 2003). What role do children play in this? What can we learn from educators, parents and children about these practices? This research aimed to investigate how educators in early childhood centres work with children and families to support children’s health and wellbeing, and implement sustainable practices with children regarding parents’ food choices.

Methodology

Procedure

Five EC centres, labelled Centres 1–5, were purposely chosen from regional northern New South Wales. Centres 1–4 were preschools open for six hours per day, and Centre 5 was a long day care centre open for 10 hours per day. Initially, contact was made with the director of each centre by email, and upon a favourable reply, a phone call was made to organise a suitable time to visit the centre. The centres were purposefully selected by the researcher (Creswell, 2014) owing to their proximity to the researcher and that parents provided the food for their child at these centres.

The director chose one educator, one–two parents and four–five children (aged four–five years) to participate in the study. No parents were available for interview from Centre 3. Thus a total of five directors, seven parents and 20 children were interviewed (see Table 1).

Table 1. Numbers and coding of participants

<table>
<thead>
<tr>
<th>Centre (C)</th>
<th>Directors (D)</th>
<th>Educators (E)</th>
<th>Parents (P)</th>
<th>Children (Chn)</th>
</tr>
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<tbody>
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<td>D1</td>
<td>C1E1 and C1E2</td>
<td>C1P1 and C1P2</td>
<td>C1 Chn</td>
</tr>
<tr>
<td>C2</td>
<td>D2</td>
<td>C2E1</td>
<td>C2P1 and C2P2</td>
<td>C2 Chn</td>
</tr>
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<td>D3</td>
<td>C3E1</td>
<td>N/A</td>
<td>C3 Chn</td>
</tr>
<tr>
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<td>D4</td>
<td>C4E1</td>
<td>C4P1</td>
<td>C4 Chn</td>
</tr>
<tr>
<td>C5</td>
<td>D5</td>
<td>C5E1 and C5E2</td>
<td>C5P1 and C5P2</td>
<td>C5 Chn</td>
</tr>
</tbody>
</table>

Qualitative face-to-face interviews were conducted with the directors, educators, parents and groups of children at each centre. The data was recorded and transcribed. Ethics approval was gained from the University’s Ethics Committee prior to the commencement of data collection. Written parent and educator consent was obtained, as well as verbal assent from the children. The children were told at the outset that they could leave the interview situation if they wished to. The interviews with the adults were semi-structured providing opportunities to explore the information in greater depth and pursue areas of interest. Each interview with the adults lasted between 10 and 25 minutes. The educators were asked about the length of time in EC, the centre’s food policy, sustainable practices and how they managed food issues with families. The parents were asked about the length of time in EC, the centre’s food policy and sustainable practices and how they made food decisions.

The interviews with the five groups of three–four children lasted five–seven minutes, were conversational style interviews and were conducted by the educator. During these conversations, photos of lunch boxes and a variety of foods were shown to the children as a stimulus for talking about foods. The photos included a range of unprocessed foods regarding parents’ food choices.
The interviews were listened to, transcribed and analysed identifying potential themes based on the contexts that influence decision making about food and sustainable practices. The ecological systems theory of Bronfenbrenner (1986) informed the analysis of the data. In this theory the context of the child plays the most significant role in a child’s learning and development. The key contextual influences were the child’s family, people within the EC setting including peers and educators (termed the microsystem), and outside influences (the macrosystem), such as the media, the NQS (ACECOA, 2011) and government health agencies. Bronfenbrenner determined that influences within the systems had bi-directional influences upon each other—the mesosystem (Bronfenbrenner, 1986). These bi-directional influences include the relationships between child/parent, child/child, child/educator, and educator/parent. While the parent is the decision maker for the food, the parent may be influenced by the child, the parents’ work context, the relationship with EC educators, the EC centre’s policy and the media. This concurs with Albon (2005) who identified parents’ decisions for foods are a result of the context. The theoretical approach aligns with the definition of sustainable development (WCED, 1987) as Bronfenbrenner’s theory views learning and development as dynamic and variable in contexts.

The analysis of the data was undertaken according to Tesch’s steps in coding (cited in Creswell, 2014, p. 198), which involved reading all transcripts, reading and reviewing each one again and identifying underlying meanings, making a list of topics in the process; then refining and reviewing these topics until clear themes emerged from the coding. The key themes related to the elements of Bronfenbrenner’s theory that arose from analysis included:

1. Implementing the macrosystem: Educators’ management of parents’ food choices and sustainable practices.
2. The mesosystem: Interactions between parents and educators.
3. The mesosystem: Interactions between children, educators and peers.

Limitations of this study
This study was limited by a number of factors. First there were only five EC centres involved in the study in regional New South Wales. However this does not discount the findings of the study—what was said by educators, parents and children is significant for reflecting upon when theorising about food and sustainable practices in EC centres. Second, the demographics represented by parents at each centre were not recorded. Third, the director chose the educators, parents and children to speak to the researcher. It may be that the director selected participants thought to support the researcher’s aims and who also understood the centre’s policies. This may have biased the sample.

Results

1. Food choices and sustainable practices

All directors and educators acknowledged difficulties in ensuring children’s lunch boxes contained healthy food. They recognised this as an area where parents’ values may be different to the centre’s healthy food policy. Different approaches were taken across centres. The director at Centre 1 had an ‘upfront and strict approach’ (C1D1) where she ‘agreed to disagree with parents’ and said the food policy was working as there had been no comments from families. This director operated from a bio-medical approach (Albon, 2005) based on the NHMRC Guidelines (2013) to enforce food choices. Likewise, Centre 2 found parents’ levels of understanding about nutrition difficult to manage:

It’s difficult occasionally—a bit tricky. One parent felt that her child was not getting enough nutrition if her child didn’t eat the cake she had sent (C2D2).

At Centre 3 the director said she felt helpless, given practices at preschool and primary schools:

There’s always the ethical question whether we should insist on some things: for example chocolate goes home and we put a note in the lunch box that this is a ‘sometimes food’. If the child does not have enough in their lunch box we don’t restrict food. But how far do we go and it’s not clear cut. And when the child goes to school it all goes out the window. There are lots of families here who have older children who are allowed to have (packaged) snacks at school (C3D3).

Centre 4 director felt she ‘walked a fine line’ as parents chose food to demonstrate their love for their child, yet she thought the centre’s food policy gave her power to support parents:

It’s a very fine line you walk between allowing the parent choice and also trying to have good nutrition. We honour what parents do. We try to keep people on track as tactfully as possible because people and their food is a sensitive thing ... but we are in a bit more of a powerful position because we have a nutrition policy and can ask them to stay within the bounds of that and pretty much they do. Also parents are away from their child for the day and they put food in as a substitute for them—they pack it with love. For example, parents cut out heart shaped sandwiches (C4D4).
Centre 5 pursued a holistic educational approach to food, from gardening to cooking in the centre and ongoing training for staff, to inform parents:

Within the [food] policy there is a big focus on education. We teach children about gardens and growing, making healthy food with children, stories, drama and so on. There is information in the newsletters about healthy eating and we seek advice from professionals. Staff do lots of training but we are not experts. Parents need information on healthy food that can be made quickly. I think time affects parents’ choices, not so much knowledge (C5D5).

The educator at Centre 5 also reinforced this holistic educational approach when she said:

We encourage children to make healthy choices; educate parents and support parents’ choices. We can’t tell parents what’s right or wrong. We can educate them about healthy food but we need to respect that they have reasons for why they choose some foods. The most important thing is to have good relationships with parents so that we can talk about these things. Sometimes lunch boxes reflect stress, such as only having a bread roll for lunch. We have to keep reminding parents about healthy food otherwise they slip back into ease and convenience (C5E1).

Different approaches were taken to managing food choices at the centres. Some EC centres viewed the NQS and government healthy food guidelines as an opportunity to make families comply with strict food requirements, while other centres took a holistic educative approach with families, children and staff. This latter approach meant educators worked in partnership with families and had respectful relationships with children—two key principles of the EYLF (DEEWR, 2009).

Policies for healthy food were given to parents upon enrolment at four centres. Centre 3 was preparing to implement this practice in the coming year. As the educator at Centre 1 stated:

By putting the food policy in place right from the start I think that helps (C3E1).

Directors reported little progress in reducing packaged food, even though they had tried. Three centres (C1, C2, and C4) had run a Nude food week where parents were encouraged to create no waste. Educators thought this ineffective, as the same food still came in and parents had disposed of the food’s packaging at home thus reducing waste for the centre but not for the environment. Centre 2 discouraged plastic wrapping, not because of damage to the environment, but it was viewed as dangerous to the children. Parents were encouraged to have lunch boxes with separate compartments so that pieces of food did not need wrapping. To reduce the number of small plastic containers, such as yoghurt containers, attempts had been made to encourage families to buy large tubs of yoghurt, and decant this into smaller reusable plastic containers. This practice had varying levels of success. Parents complained the small plastic recyclable containers got lost, and that it took extra time to decant.

Directors and educators were uncertain why parents chose packaged food for children. The director at Centre 2 was puzzled as to why parents chose packaged fruit over fresh fruit:

Perhaps parents are too busy; or it’s too difficult, but some parents work full time and send beautiful lunches. Regarding litter … we talk to the children. Our plastic bin is our fullest bin … we wash the yoghurt containers ourselves, and reuse them … The fruit is pureed, and so processed. A fruit is a fruit … Why are parents attracted to it? … Parents see packaged food as a status symbol; children also like the labelling—like the Disney characters (C2D2).

The educator at Centre 3 identified two reasons why parents sent packaged food for their child: one was lack of time, and the other was cultural. For example:

Parents think that if we give our children lots of things in packages we are doing the right thing; and this is what they think their child will eat at preschool (C3E1).

The director of Centre 3 thought that addressing the food in packaging would help the environment and children’s health:

We want to get rid of snacks in individual packaging because we know they’re full of sugar and salt. If we can reduce waste we will also improve nutrition. It’s of two-fold benefit for us and the environment (C3D3).

The educator at Centre 5 had collected all the plastic waste from food for a week and then made a collage out of it with the children as an educational display. She had also buried three types of waste the children sorted at lunch time—the food scraps, the non-recyclable waste and the paper. Six months later she had dug it up to show the children what happened to each of the types of rubbish, and how plastic does not decompose. The nearby creek was used as an example of how rubbish can get into the waterways. She said that:

Children influence parents’ choices a little. We talk about landfill and how our turtles are dying as a result of eating plastic washed down our drains and out to sea. Children put pressure on parents to buy foods such as Ben Ten™ and parents buy food thinking that is what the child wants (C5E1).

The director at Centre 5 said:

I prefer not to see yoghurts with popular culture figures but I don’t see how we can stop that when it’s been offered to the parents as a way of coping—life is stressful and they choose what they can cope with. When parents get home they are tired and exhausted and it’s stressful for parents to know what to pack in their child’s lunch box. I don’t think we can solve that without changing what supermarkets offer—there has to be global change (C5D1).

Children were told by educators to eat healthy foods first, then they could eat the unhealthy food, or had to take the food home. Educators said that children occasionally got upset.
about not being allowed to eat their food. Centre 4’s note to parents stated these types of food caused problems with the child’s peers, as other children were not allowed to have them either:

> We put in a nice little note to send to the parents stating: ‘Would you please try to avoid chips as it sets up a problem with the other children’; this then is not an out and out condemnation of chips but the relationships with peers [is considered] (C4E1).

The educator at Centre 2 said she was:

> A bit strict and I tell them [children] they can’t eat it [the sometimes food] until after preschool, although if they are still hungry then they can eat it. Children cover it up and hide it [the unhealthy food], peers see it and ‘dob’ them in (D2E1).

The terminology of ‘sometimes food’ was used across all five centres. Sometimes food was not supposed to be eaten every day but rather on special occasions, such as a birthday, and was viewed as ‘unwelcome food’ (Edwards et al., 2012). Sometimes foods included packaged food, including packets of chocolate biscuits, chips, lollies and muesli bars. Children were told to eat the food for afternoon tea at home. This did not send children a holistic educational approach about the eating of food; rather, children could eat unhealthy food outside the centre as a child stated:

> You can’t take chocolate to preschool—it’s not a preschool food. It’s not an everyday food, it’s a home food ... Chocolate has lots of sugar in it (C2C2).

At Centre 3 the educator took a holistic approach to educating the children about food:

> I show children where food [comes from] such as making lemonade, ice cream and bread. When it’s embedded it gets through and the children pass the message onto families (C3E1).

The educator at Centre 5 indicated they respected parents’ decisions for the food that was sent to the centre, as they stated:

> We talk about what’s in the child’s lunch box. Our approach to not so healthy food is sometimes difficult. If we know the family situation—sometimes parents send convenient food—then we talk to parents (C5E1).

Overall, practices varied about managing unhealthy food, from educators asking children to take it home, to taking an educational approach of showing children the origin of foods.

2. The mesosystem: Interactions between parents and educators

Parents identified that the EC centre influenced food decisions and responded in various ways; from compliance to the centre’s policies and using their advice in preparing their child’s lunch to testing the rules by sending unhealthy food for their child to ‘let my child know I was missing her’ (C1P1). Here we see how a parent’s values influence food choices—the love felt for a child was symbolised by food, even though she knew that this was not aligned with the centre’s policy, and that it may cause problems for other children. Compliance was illustrated by the following comment:

> I thought I would get into lots of trouble if I didn’t ... there is a lot of respect for teachers here (C1P1).

The second parent at Centre 1 said she had found it difficult to comply with the centre’s food policy initially because:

> It is quite easy to grab bits and pieces [for the lunch box]—so it was hard at first, but I have gotten used to it now (C1P2).

Parents at Centre 2 were aware of their centre’s food policy and P1 had chosen this centre because her previous EC centre had provided food that had too much sugar in it for her liking. Parent 2 said his child had a ‘sweet tooth’ (and the parent admitted he had a ‘sweet tooth’ too). He said:

> If he’s lucky he’ll get a chocolate biscuit. We’re not allowed to have chocolate biscuits, and I will say: It’s OK just sneak it in. But then sometimes he’ll bring it home. He’s a stickler for the rules. Then he eats it when he gets home (C2P2).

The parent from Centre 4 said her child was ‘fussy with food’, and while her decisions were based on the centre’s food guidelines, she also had to be aware of what her child would eat.

> My son doesn’t eat fruit, which makes it hard. When I go shopping I choose packaged food—I have tried to cut up bits of cheese and give him biscuits but he won’t eat them, but will eat the packaged ones (C4P1).

Both parents interviewed at Centre 5 were self-claimed healthy food people. Parent 1 based her food decisions on educational material provided by the centre. Parent 2 was of Spanish descent and believed lunch time should be a wholesome meal as this was part of her Spanish culture. She packed a substantial lunch for her son, stating that it took her 45 minutes each night to make her two children’s lunches. She believed that providing healthy food for her children will lead to their healthy food decisions later in life.

Overall there were multiple influences on parents’ decisions for food for their child: attachment and love for the child; the child’s food likes/dislikes; their own food preferences; the EC centre’s food policy; and cultural background of families.

3. The mesosystem: Interactions between children, educators and peers

The children named fruits and vegetables as healthy food, and unhealthy food as biscuits, chocolate and cakes with ‘lots of sugar’. Salt and/or sugar were given for reasons by the children in each centre as to why food was unhealthy. A child at Centre 3 said healthy food was good because:

> It is food that makes you sparkle (C3C2).
In three of the five centres it was common for the children to police each other’s food and assist the educators to enforce the rules around healthy eating. In recognising sometimes food in his/her lunch box, the child was likely to say, in front of his/her peers:

*Oh I will eat this in the car on the way home* (C1C2).

It was common for children to blame their parents for the food in their lunch boxes. The children at Centre 5 said:

*Jack had unhealthy food because his mum packs chocolate and Sarah had chocolate, and sometimes Miranda’s mum gives Miranda Nutella™* (C5C3).

*I usually tell my mum not to give me cake but she just does* (C5C2).

*I have them [packaged crackers and dip] every single day. Mummy wants me to have them. Because I like them and she buys them for me* (C5C4).

When children were asked about what happened to the packaging on their food, they said they sorted it and:

*The bin man comes and collects it and takes it to a big bin. Then it goes to the tip* (C2C2).

At Centre 5 the educator asked what happens to plastic when it is thrown away. One child replied:

*If it gets thrown on the ground, the fish eat it cos they think it’s food and they die. Turtles pop up when they have plastic in them* (C5C2).

Overall the children enacted powerful roles by talking about peers’ unhealthy food and blaming parents for food decisions. But this was not without emotional distress as educators indicated children often got upset about not being allowed to eat food sent in by their parents.

**Discussion and conclusion**

This study investigated how educators in early childhood settings work with children and families to support children’s health and wellbeing, and practised sustainability regarding food. The key findings demonstrate that food in EC centres provided by parents is a vexed issue. The NQS (ACECQA, 2011) has children’s best interests at heart, from a healthy eating and environmental education perspective. But parents’ decisions and values regarding food frequently clash with EC healthy food policies.

Parents, children and EC educators have bi-directional influence upon each other (Bronfenbrenner, 1986). Parents’ decisions for their child’s food involves emotions, including concern for the child’s wellbeing, loving the child and being a good parent (Albon, 2005). When the child and family’s food values are rejected, the notion of belonging to this EC community is disrupted. Figure 1 illustrates two approaches to implementing healthy food practices in EC centres. Figure 1A illustrates bi-directional interactions that occur when holistic approaches to education are taken, which encompassed partnerships with families and respectful relationships with children. Figure 1B illustrates how interactions between EC educators/parents and EC educators/children were one-way. Where a holistic approach to healthy eating and sustainable practices was adopted, taking an educative role with children, families and staff supports multiple understandings of all stakeholders (Rogoff, 2003).

Each EC centre engaged in sustainable practices, indicating progress regarding environmental education. However the amount of waste was a source of frustration for educators, and not all children were conversant with what happens to waste. Implementing sustainable practices requires educators to have knowledge about the reasons for these practices—not merely because children enjoy them. Some educators were skilled at embedding holistic sustainable principles, such as teaching children where food came from and connecting children with foods; or in the case of Centre 5, the educator had buried waste in the garden to demonstrate how plastic does not break down. Children at Centre 5 were articulate about the damage plastic could cause to marine life. Such approaches require educators to be knowledgeable about environmental education and to learn and reflect upon what sustainable practices mean in a holistic sense beyond the early childhood setting.

Figure 1. Two approaches to implementing food and sustainable practices in early childhood centres: A. is inclusive and holistic; B. is educator directed.
Empowering children to be active citizens of their community (Hart, 1992) is a key goal for sustainable development. Pedagogical practices should encourage children to understand healthy eating and sustainable practices. Educators can collaborate with children, fostering their shared responsibilities to the environment and humanity (ECA, 2009, p. 3), and children can be encouraged to be socially responsible, take agency and develop responsibility for others and the world. To truly implement a program for healthy food and sustainable practices will require a culture of healthy eating and sustainability across the community of the early childhood centre. This takes time and requires educators to take a personal and professional approach to being informed and critical thinkers.

References


The impact of free-choice motor activities on children’s balance control

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This research attempted to determine which kinds of free-choice motor activity improve balance control. One hundred and fifty children from three kindergarten classes participated in the research. They were provided with an environment that enabled them to choose motor activity freely for 180 minutes each day, 90 minutes outdoors and 90 minutes indoors, five days a week for 32 weeks. The difference between the three kindergartens consisted of the number of facilities intended for balance exercise and their location indoors or outdoors. The findings showed that children attending kindergartens in which the balance facilities were located both indoors and outdoors had better achievements than those attending kindergartens having balance facilities only indoors or only outdoors. A regression analysis pointed to only social types of free-choice motor activity having a significant impact on improvement of balance control. Further research is suggested to determine the optimal social and physical environments that enhance balance control.

Introduction

Human balance control is the capacity to maintain one’s equilibrium when moving or standing in a certain position, and it is necessary in every activity being performed on a base that is narrower than the base on which the person usually moves as part of daily activities (Eckert, 1979; Pollock, Durward, Rowe & Paul, 2000).

Control of balance lies at the foundation of children’s fundamental motor skills, and is also necessary when children learn new motor skills (Austad & van der Meer, 2007). In addition, balance control is the basis of the ability to focus attention on learning (Blythe, 2000) and can be either static or dynamic. Static balance involves the length of time the individual succeeds in stabilising his/her body trunk in a way that enables one to focus his/her eyes (Rogers, Wardman, Lord & Fitzpatrick, 2001; Slijper & Latash, 2000). This activity depends on the control of sensory feedback based on a closed-circuit system in which pressure at the centre of the foot is continuously on the centre of the body mass (Winter, Patla, Prince, Ishac & Gielo-Perczak, 1998).

Dynamic balance, on the other hand, is a fundamental component of most complex tasks, mainly including coordination, which involves maintaining one’s body equilibrium during the progression of various movements, thus enabling stability and reflection—during the performance of complex tasks, the body has to constantly react to changes occurring in this progression (Hatzitaki, Zisi, Kollias & Kioumourtzoglou, 2002). Dynamic balance comes into play whenever one performs an action in which contact with the ground is temporarily suspended, such as running and jumping (locomotor skills), since in the transition stage, when the person performing the action shifts from one base to another, he/she has either partial or no contact with the ground. Balance has to be maintained both off the ground in order to return to the base and on the ground when stabilising the landing.

When the performed movement includes lifting the body off the ground and at the same time performing an additional action, such as clapping one’s hands or turning the body while hopping, the movement becomes more complex. Not only is the body required to perform an additional movement that raises the level of difficulty of coordination of the body’s dynamic balance, but this additional movement requires the performer to have enough muscle strength for reaching height and to have the ability to plan in advance both the amount of strength needed to execute the hop and the timing of the movement as the body reaches the peak of its trajectory (Assaiante, 1998; Kohen-Raz, 1986). Therefore, it is likely to occur later in the development scale.
There are two reasons for examining the effect of free-choice motor activities in kindergarten children. The first reason is that children spend a large part of the day in the kindergarten (Venetsanou & Kambas, 2010), where they have a physical environment in which they can choose the activities for their learning (Berris & Miller, 2011) and where much of their daily physical activity takes place. The second reason is that, at ages four to six, children have the most significant potential for developing their balance control, provided they are given the conditions in which to practice balance maintenance (Chow & Louie, 2013; Rival, Ceyte & Olivier, 2005; Shala & Bahtiri, 2011). In many cases, motor activity time in kindergarten is the only regular physical activity a child performs throughout the day (Pate, Pfeiffer, Trost, Ziegler & Dowda, 2004).

Typically, motor activity in kindergarten takes place either outdoors in defined areas equipped with playing facilities, or indoors with various apparatuses the child uses as part of elective activities done in learning centres (Giagazoglou et al., 2011; Mikkelsen, 2011). Moreover, teachers are responsible for organizing the environment in a way that keeps the children busy in various activities and for ensuring that the atmosphere and the conditions in which the children play will encourage them to become involved (Martin, Rudisill & Hastie, 2005).

This study examines the following types of motor activity as observed while the children choose to perform outdoor and indoor activities (Goldhirsch, Wagner & Vinocor, 2002): social activity compared with individual activity (Larkin, 2009; Whitebread, Bingham, Grau, Pino Pasternak & Sangster, 2007); activity in large facilities and with small equipment (Gubbels, Van Kann & Jansen, 2012); and non-motor activity such as socio-dramatic games (Fuligni, Howes, Huang, Hong & Lara-Cinisomo, 2012). Additionally, sometimes children do not move about during free-choice activity time, but instead observe other children who are doing so (Benham-Deal, 2005).

Studies investigating the impact of planned activity programs on the various motor components of the body have pointed out the advantages of such programs as compared to free-choice motor activity (Alhassan et al., 2012; Goodway, Crowe & Ward, 2003; Riethmuller, Jones & Okely, 2009; Wang, 2004). However, in spite of the advantages, these programs have two limitations: (1) in order to teach planned activity programs for the long term, professional training is required, which most kindergarten teachers do not receive—the programs also require professionalism in teaching physical education, which kindergarten teachers usually do not have (Tucker, 2008); (2) the infrequency of such lessons—they are only given once or twice a week and therefore cannot be a good substitute for the free-choice, daily physical activity performed by children according to their individual needs (Hannon & Brown, 2008).

There do not seem to be any studies that have examined the effects of various types of free-choice motor activity on balance control or on the mastery of fundamental motor skills. Indirect data obtained shows that when an educator in kindergarten intervenes, children’s initiated activity decreases (Brown et al., 2009; Jones et al., 2011; Whitebread et al., 2007), while social activity with peers is one of the conditions for creating more intensive, and a greater amount of, motor activity (Dowda, Pate, Trost, Almeida & Sirard, 2004; Kyhälä, Reunamo & Ruismäki, 2012).

The current research attempted to answer two questions: (1) Does an environment that encourages children to exercise balance improve balance control?; (2) Which types of free-choice motor activity improve balance control?

Method

This research is a field study that was carried out in three public kindergartens, all of which shared a similar daily routine lasting 300 minutes. Of those, 90 minutes were dedicated to outdoor activities and 90 minutes were allocated to indoor activities in free-choice activity centres. The motor centre was one of six activity centres and the children could move freely from centre to centre at will, according to their choice. For the rest of the time, the daily routine was dedicated to teacher-directed small and whole-group activities, meals and transitions between activities.

Moreover, the three kindergartens were provided with a core of identical facilities. Outdoors, all three had a sand box, socio-dramatic facilities, climbing equipment, slides and horizontal bars of different heights. Indoors, they had small objects such as balls of different sizes, rings, loops, sand bags and a hit-the-target facility. Where they differed from each other was in the addition of balance facilities. Outdoors, these additional facilities included graded balance beams ranging from low-wide to high-narrow at an increasing level of difficulty. Moreover, rubber tyres in vertical and horizontal positions were placed on the ground, a frame for children to exercise their balance was placed in the sand box and progression lanes were marked on the ground in the socio-dramatic facilities. Indoors, these additional facilities included balance beams, pedals, a spring board, small balance platforms on wheels or on half a ball, crutches and a vestibular plate. Table 1 shows the division of the research groups.

Table 1. The research groups

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<th>Balance facilities: Outdoors</th>
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Participants

The participants were 114 students from three kindergartens in three different semi-rural communities in a central district in Israel. One kindergarten contributed two groups to the sample, whereas the other two kindergartens contributed one group each. There was no statistically significant difference in the children's mean age (57–60 months) and gender distribution (36–42 per cent males) across the groups.

Measures

Dependent variables—Balance control

This was tested with the ‘Clinic Psycho-Motor Test’. The reported test validity of this test is 0.65, while its repeat reliability is 0.95 (Kohen-Raz & Hiriartborde, 1979). The test examines: (a) dynamic balance—walking on the balance beam forwards, backwards, right and left; (b) static balance—standing on the right foot, standing on the left foot and standing on the heels while touching the toes; and (c) complex balance control—jumping and turning 180 degrees and jumping up and clapping three times while the body is in the air. Since this study focused on improvement of balance control, the balance variables consisted of the difference between the pre- and post-balance tests.

Independent variable—Time spent in various types of free-choice motor activity (TOT)

This was measured by using an observation tool that addressed 10 different types of activities. The initial instrument in the motor skill observation was based on a booklet from the Israel Ministry of Education (Goldhirsch et al., 2002). The instrument was piloted in observations that were done by both researchers and teachers. Following the pilot, the final instrument represented three categories of indoor activities and seven categories of outdoor activities (see Table 2).

The indoor observation took place in the motor centre. The observers were asked to differentiate between the following social behaviours: (1) Individual activities—A child focused on a motor activity he/she performed with no interaction with other children; (2) Group-leading activities—A child performed the activity either with one or several partners; (3) Group being-led activities—A child did what others told him/her to do.

In the outdoor observation, the observers were able to differentiate between two social activities and five motor activities. In each observation period, the observers reported both motor and social types. For instance, a child using a swing alone was registered as doing both an individual activity and using a large piece of equipment. Activities of a social character were as follows: (1) Individual activities—defined as activities a child performed without having interaction with peers; (2) Group work—defined as an activity in which a child participated together with at least one partner. Activities of a motor character were: (1) Playing in large facilities—motor activity taking place in fixed facilities; (2) Playing in open spaces with and without small apparatuses—motor activity in open spaces where there were no facilities, with or without small portable objects that could be used for the duration of the activity; (3) Rest and conversation—children took a rest next to the facilities, accompanied by conversations with other children; (4) Non-motor activities—this refers to non-motor learning processes, such as games based on imagination, building and socio-dramatic play; (5) Out-of-task activity—anything that was not related to learning and occurred in the kindergarten outdoors, such as standing alone in a corner of the yard, or the display of violent behaviour.

The stretches of time in which children left the outdoors and went indoors for any reason whatsoever were not included in the observations. During the study, the teachers observed each child four times, recording all the child’s activities during the free-choice period. Time reported in this study is the average length of time in minutes per day.

Procedure

A pre-test was administered in each of the kindergartens in the fourth week of the school year, following the period of adjustment to the kindergarten by the children, while the post-intervention test was administered in the thirtieth week of the school year. The entire intervention lasted 32 weeks, for five days a week. The kindergarten teachers strictly adhered to the daily schedule, observing the children as described above. The research was approved by the Israeli Ministry of Education’s Chief Scientist Office, contingent on the use of direct observation only. Using video or tape recordings was not permitted.

Statistical analysis

Descriptive statistics and one-way analysis of variance (ANOVA) were used to identify any dissimilarity across the sub-groups by the variables of interest (Tables 1 and 2). In addition, before the main analysis was carried out, we used 11 linear regression models (details not presented here) to identify whether TOT could be predicted by demographic variables (age, sex and kindergarten). Since we received 44 impacts (11 regressions and four independent variables in each regression), we applied Bonferroni’s correction for alpha inflation to set up an acceptable significance level of \( p < 0.00114 \). The results indicated that age had a positive impact on three types of activities: the indoor average was \( \beta = 0.45 \); the indoor group-leading activity average was \( \beta = 0.39 \); and the outdoor average for playing in large facilities was \( \beta = 0.33 \). We also found that in group KP, outdoor individual activity was greater than in the other kindergartens, with an average of \( \beta = 0.33 \). No other statistically significant impacts on behaviour were found related to gender, age or kindergarten. These initial results were the basis for the main analysis, which included six two-block linear hierarchical regression models to predict...
each of the balance variables measured in the study (Table 3). The first block included the demographic variables (age, gender and kindergarten) to ensure that the impacts of those variables were held constant (or controlled) in the analysis. The second block included all 11 choices measured in the study using the stepwise method (Cody & Smith, 2006, p. 291). It should be noted that we also applied tests for co-linearity to ensure that the regression models were appropriate, particularly given the associations we found between age and some of the activities.

Limitations of the study
The main limitation of this study is the relatively small number of observations—four observations per child for the year-long study. Moreover, since videotaping was not allowed, the only information that could be obtained was about the duration of the observation, but not the quality of the activity.
Before considering the questions concerning the connection between the different types of free motor activity and balance control—and since the children were given freedom to choose the activities in their given environment—it is interesting to see the relative time spent in various types of free-choice motor activity. Table 2 presents the following picture concerning indoor kindergarten activity.

Children in all the groups spent one-third of the 90 minutes allocated to total activity in the learning centres doing motor activities (33.4—KP; 33.21—KS; 33.33—KM). The difference between the learning centres was that two of them (KS and KP) focused on providing opportunities to practice balance control, while the third did not. This did not have an impact on the length of time the children spent in the motor learning centre. Of the total time the children spent in the motor activity centre, approximately a third was spent in individual activity and two-thirds in group work. In this, too, there was no difference between the kindergartens. The group work was divided into leading and being-led activities, and here there were differences between the kindergartens: whereas in the KM and KS kindergartens, in which there was an abundance of balance exercise facilities, the leading and being-led activities occurred with equal frequency, in the KP kindergarten, in which there were mainly small objects to play with—these two activities did not occur with equal frequency, it seems that there were only a few cases of children leading an activity and many instances of children being led. Regarding outdoor activity, Table 2 shows that the average length of time the children spent outdoors was very high, ranging between 75 to 88 minutes of the 90 minutes allocated to these centres (83—KP; 88—KS; 75—KM).

However, this also includes non-motor activity. From the social point of view, the majority of the time that the children spent in the kindergarten outdoors was devoted to social interaction situations and not to individual work. The KM kindergarten, in which most of the outdoor facilities were of the balance type, was markedly different from the others because of the low frequency of individual work (see Table 2). From the motor point of view, about half of

<table>
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<th>Group</th>
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<td>0.69</td>
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***p < 0.001; T1: tests at the beginning of the year; T2: tests at the end of the year

Results

The relative time spent in various types of free-choice motor activity

Before considering the questions concerning the connection between the different types of free motor activity and balance control—and since the children were given freedom to choose the activities in their given environment—it is interesting to see the relative time spent in various types of free-choice motor activity. Table 2 presents the following picture concerning indoor kindergarten activity.

# Table 2. Difference in balance variable between groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Balance tests</th>
<th>M</th>
<th>SD</th>
<th>95% Confidence interval of the difference</th>
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<td>Lower</td>
<td>Upper</td>
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the allotted time was spent in motor activity (use of large apparatuses, activity in open spaces with small objects). The KS kindergarten, where there were various facilities, was characterised by the length of time children devoted to conversation and rest. In the remaining activities, there was no difference in the division of the allotted time.

The environment which improves balance control

Table 3 shows a significant improvement in post-tests compared to pre-tests. Seemingly, there was a significant improvement in all the tests, except the jump-and-triple-clap one: the children in the KS and KP kindergartens did...
The types of free-choice motor activity which improve balance

It can be observed in Table 4 that indoor individual activities had a positive impact on five out of the six balance variables measured in this study. Outdoor group activities positively contributed to improvement in total balance, dynamic balance and static balance. Outdoor activities with large facilities had a positive impact on only 180-degree jump-and-clap skills. It should be noted that no other activities observed in this study predicted significant improvement in balance control, with the exception of age, which was positively associated with improvement in complex balance control.

Discussion

This study, like some others in this area, shows that children do not use all the time allotted to them for free motor activity (Dymant & Coleman, 2012; Fuligni et al., 2012), but intertwine it with other activities, including conversation, rest and socio-dramatic play. This can be explained by the perennial need of children to move about for short stretches of time and to rest in between activities, as well as by their right to choose an activity among all the options available (Trost, 2001). In addition, it must be taken into consideration (Burdette & Whitaker, 2005) that the environment in which motor activity occurs may provide them not only with stretches of physical activity, but also with the opportunity to learn by observing and imitating their peers or talking with their peers, enabling them to improve their understanding of motor activity (Ashford, Bennett & Davids, 2006).

The findings of this study suggest that it is advisable to spread out the opportunities for performing motor activity over a relatively long period of time in order to enable children to choose the length of time for their activities. The ideal length of time and environment for an activity is yet to be investigated (Wrotniak, Epstein, Dorn, Jones & Kondili, 2006).

The results of this study show that all the children in the experimental kindergartens improved significantly during the year. This can be explained by the relatively long period of time—32 weeks—between the pre-intervention and the post-intervention tests; the children improved because they grew older (Kakebeeke, Caflisch, Locatelli, Rousson & Jenni, 2012) and also because in all three experimental kindergartens, the kindergarteners were offered a learning environment and enough time to encourage them to engage in physical activity. The children in the KM kindergarten, in which there were many balance facilities both indoors and outdoors, improved their balance significantly more than the children in the other two kindergartens. This means that balance can be improved by practice and that this practice does not necessarily require direct instruction. It is enough to have a well-equipped balance-fostering environment to improve this capability.

This study adds support to the theory suggesting that a connection exists between the environment and a child’s motor ability (de Barros, Fragoso, de Oliveira, Cabral Filho & de Castro, 2003; Raudsepp & Päll, 2006). Nonetheless, it does not provide clear guidelines about the optimal level of balance that can be reached in early childhood through freely chosen activity.

The main findings concerning the associations between the types of motor activity and improvement of balance control are also influenced by the social sphere. On the one hand, it was found that individual activity in kindergarten is related to balance control, but on the other hand it was found that group activity outdoors influenced balance control as well. This can be explained by the differences in the nature of the environments. Indoors, motor activity occurs as part of learning in learning centres. The time the children spent there was perceived as learning time (Vitiello, Booren, Downer & Williford, 2012). The area allotted to the movement centre was relatively small, as space had to be shared with the rest of the learning centres. The equipment was largely designed for individual activities, such as playing with the spring board, pedals or small balance platforms. Most social processes there involved coordinating the duration of play-time each child got with a specific object, or coordinating the exchange of objects among the children, but there was very little social communication involving learning while the activity took place (Butler, 2008). It should be noted that verbal communication in limited and crowded quarters causes constant noise. It can be assumed that the noise has a double effect: first, it makes it difficult for children to communicate for prolonged periods of time or about matters of content, and secondly, noise acts as a negative stimulus interfering with a child’s ability to maintain balance control (Sheykholeslami, Kaga, Murofushi & Hughes, 2000). Finally, children practise their balance control when they are influenced by a number of external stimuli (Zachopoulou, Tsapakidou & Derri, 2004), and in this study it was demonstrated that the teachers structured those environmental stimuli to support the acquisition of balance control.

Outdoors, motor activity had a different impact on balance. This was the time for pleasure and relaxation in relatively large, open spaces (Yilmaz & Bulut, 2007). Children practised balance control in large facilities, such as ones made of bars, rows of tyres arranged close to each other, or various kinds of climbing structures. These facilities enabled a large number of children to play simultaneously using the same facility, to coordinate their activities and...
communicate verbally as they played, and to learn from one another (Karbach, Kray & Hommel, 2011; Wood & Attfield, 2005).

To conclude, creating an environment for four- to six-year-old children to enhance particular activities and give them a free choice to experience balance activity is likely to improve their balance control. Although this study examined only the connection between the environment and balance control, it points to the possibility that children are capable of adapting various types of free-choice motor activity in order to progress in their motor learning.

Further research is needed to identify the particular conditions and activities that improve children’s motor abilities, as well as to identify the optimal activity time required for such improvement.

References


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Introduction

Sleep is important. Across the lifespan, sleep, alongside nutrition and exercise, is a key pillar of health that affects daily functioning and lifelong wellbeing (Galland, Taylor, Elder & Herbison, 2012; Wong, Halaki & Chow, 2013). Sleep is particularly important in childhood. Commensurate with findings from adult populations, the quantity, quality, rhythmicity and regularity of sleep experienced by children predicts their ongoing wellbeing (Bell & Zimmerman, 2010; Lam, Hiscock & Wake, 2003). Sleep in early childhood may have a greater importance, however. Early childhood is both a foundational period in sleep development and one in which sleep patterns are increasingly sensitive to the environment (Touchette et al., 2013). From birth to five years, sleep consolidates into the night period and habitual daytime sleep ceases. The speed with which this happens and the patterns of sleep that develop are affected by the care environment, both in the home and early childhood education and care (ECEC) setting (Jones & Ball, 2013; Staton, Smith, Pattinson & Thorpe, 2014).

Sleep in early childhood is controversial. In early childhood, the regulation of children’s sleep patterns affects not only the child but also the wellbeing of their adult carers and other family members (Hiscock & Wake, 2001; Martin, Hiscock, Hardy, Davey & Wake, 2007). A perennial issue is the way in which the needs of adult and child should be balanced and the degree to which adult carers should shape or respond to a child’s sleep pattern (Blunden, Thompson & Dawson, 2011; Douglas & Hill, 2013). Most controversy has centred on parenting. For example, there has been considerable debate about the relative value of adult-led behavioural modification of children’s sleep (controlled crying, controlled settling) compared with that of alternative child-led approaches that advocate education about normative sleep development and promote more responsive approaches to children’s sleep behaviour (Middlemiss, 2004). In contrast there has been relatively little public debate about sleep practices in settings outside the home (Staton, Smith & Thorpe, 2015). This is surprising given that the out-of-home context has the added complexity of a triadic relationship in which decisions about sleep practices...
involves, and affects, the family, ECEC educator and the individual child (Ahert & Lamb, 2003; Groeneveld, Vermeer, van IJzendoorn & Lintoning, 2010; Pierrehumbert, Ramstein, Karmaniola, Mijkovich & Halfon, 2002).

The purpose of the current paper is to shed light on this ‘sleeping elephant’ in the early childhood education and care room, and in ECEC services more broadly. The article draws upon existing scholarship to explore the issues and tensions associated with mandating sleep/rest, in the context of Australian curriculum and quality standards documents, to establish a series of questions and issues for practitioners to consider in their own local settings. In this paper, we draw on the Education and Care Services National Regulations (NSW Government, 2011), and use the broad phrase ‘sleep and rest’ to refer to standard routines and practices designed to meet children’s needs for sleep and/or rest during the day while attending an ECEC service. While the practice of sleep and rest time is evident across all formal ECEC services (e.g. long day care, kindergarten and family day care), our focus is centre-based services. In particular our interest is in the requirements and expectations for children aged three–five years, because after the age of three years the majority of children cease to require daytime sleep (Acebo et al., 2005; Iglowstein, Jenni, Molinari & Largo, 2003). We examine theory, research, policy and practices regarding sleep in ECEC in Australia, from historical and contemporary perspectives, and raise questions for debate and critical reflection among professionals, parents, policy-makers and researchers in contemporary ECEC.

Setting the context: The National Quality Framework

In 2009, the Council of Australian Governments (COAG) (DEEWR, 2009) committed to a new comprehensive National Quality Framework (NQF) to cover all formal ECEC services prior to school entry. The NQF marks an important shift in quality assurance in Australian ECEC, from what was a prescriptive two-tiered system of state regulations and national accreditation to an integrated system that combines minimum regulation standards and higher quality aspirational standards to promote and support continuous quality improvement. Perhaps, most significantly, the NQF applies performance-based standards that allow flexibility, professional judgement and local interpretation.

Within this context, the National Quality Standard (NQS) identifies the need for ECEC services to make provision for each child’s sleep, rest and relaxation needs:

Quality Area 2, Element 2.1.2: Each child’s comfort is provided for and there are appropriate opportunities to meet each child’s need for sleep, rest and relaxation (NSW Government, 2011, p. 165).

However, this standard does not stand alone. Reflecting contemporary research and practice wisdom, the NQF adopts a holistic perspective on quality and learning in ECEC, and quality areas and elements are seen to be inter-dependent. The standard relating to sleep, rest and relaxation is specified against a background of other requirements within the NQS that also have relevance to the provision of sleep and rest time.

In Figure 1, we specify some key quality standards relevant to the practice of scheduled sleep and rest time in ECEC and the issues they raise. There are three broad areas of tension that emerge that relate to child rights, family rights and ECEC responsibility. The issue of child rights relates to the relative costs and benefits of sleep/rest time and are set against those of costs and benefits to child learning (Quality area 1) and other aspects of health and wellbeing (Quality area 2). The issue of child and family agency in determining sleep/rest needs and the appropriate timing for meeting these needs is set against the ability to accommodate needs within the facilities of the ECEC environment (Quality area 3), and decisions made by services and educators to schedule sleep/rest time (Quality areas 5 and 6). The responsibility of the ECEC centre relates to the level of supervision of children and the use of sleep/rest time for other staff duties as pitched against the number of children who do not actually sleep in the sleep/rest period (Quality area 4). To understand how best to provide for sleep and rest in ECEC contexts, there is a need to recognise the range of available practices and reflect on these in light of research evidence including the accounts of children, parents and educators in response to sleep/rest practices.

Sleep/rest practice in Australian ECEC

There is currently a range of practices relating to provision for children’s sleep, rest and relaxation documented in Australian ECEC settings. In Table 1, we outline and define these practices based on observations of sleep and rest practices conducted in 130 ECEC rooms (Staton, 2015). Across ECEC services in Australia, provision for sleep and rest for three- to five-year-olds may include responsiveness to individual children through provision of quiet places to rest and retreat and, in a few centres, activities such as massage, mindfulness and guided imagery. More commonly, provision is made through the standard scheduling of a sleep and rest time in the middle of the day (Staton, Smith, Pattinson & Thorpe, 2015). There is however considerable variability in the practices used within this scheduled period. These vary in the levels of choice and autonomy for the child. Both the standard scheduling of sleep and rest time and mandating of a period of sleep present challenges of incompatibility with other requirements specified in the NQS (see Figure 1). The mandating of sleep and rest raises questions about whether some services and educators recognise sleep and rest time as part of the educational program, and therefore subject to these requirements, or whether they see this as a period of time outside the educational program.
Table 1. Definition of sleep, rest and relaxation practices in Australian ECEC services

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Group provision for sleep and rest</td>
<td>Centres allocate a time for sleep and lower levels of stimulation for the group during the day.</td>
</tr>
<tr>
<td>Individualised provision for sleep/rest</td>
<td>Centres allocate space for sleep and lower levels of stimulation and retreat throughout the day to enable response to an individual child’s needs.</td>
</tr>
<tr>
<td>Scheduled sleep and rest time</td>
<td>Centres define a specific time in the day, typically following lunch, during which a sleep and rest period occurs.</td>
</tr>
<tr>
<td>Mandated sleep</td>
<td>Centres allocate a period of time in which children are required to lie on a bed or cot with no other activity permitted regardless of whether they sleep.</td>
</tr>
<tr>
<td>Mandated rest</td>
<td>Centres allocate a period of time in which all children are required to engage in a quiet activity.</td>
</tr>
<tr>
<td>Relaxation</td>
<td>Centres make provision for children to engage in activities that reduce the child’s levels of emotional stress.</td>
</tr>
</tbody>
</table>

Note: Definitions derive from direct observations of sleep practices in 130 ECEC rooms (Staton, 2015).
Children’s requirements for sleep and rest

There are many reasons why children may require sleep or rest during their day in an ECEC program. First, there is considerable variation in the timing of the biological transition from daytime napping through to monophasic sleep in which the requirement for daytime sleep ceases. Among preschool children aged three–five years, while the majority will have ceased to require daytime sleep, between 15 per cent and 30 per cent of children will not yet have achieved monophasic sleep and will require sleep during the daytime, at least on some days of the week (Acebo et al., 2005). Second, daytime sleep may compensate for disrupted night sleep. In some families, particularly those living in conditions of social disadvantage, higher levels of disruption to children’s night sleep associated with factors such as noise, overcrowding and family stress has been reported, and may mean that more children will require an opportunity to sleep or rest during the day (Kelly & El-Sheikh, 2011; Mezick et al., 2008). Third, a quieter, less social period of time may reduce the stress of a busy and long day in ECEC. Evidence from biological studies measuring salivary cortisol (a marker of stress) across the ECEC day suggests ECEC, especially across a long day, can be stressful for some children (Sims, Guilfoyle & Parry, 2006). A following argument has been that a period of sleep or rest serves to reduce such stress (Desjean-Perrotta, 2008). However, evidence on the impact of sleep time on cortisol does not show that rising cortisol patterns across the ECEC day are reduced by the experience of sleep time (Ward, Gay, Alkon, Anders & Lee, 2008; Watamura, Sebanc & Gunnar, 2002). Further, differential effects are found for children who do and do not sleep within an allocated sleep time (Staton, Pattinson, Smith & Thorpe, 2013; Ward et al., 2008). Finally, sleep and/or rest may benefit learning. Studies have shown that for children who still typically need a daytime sleep (biphasic sleep stage), memory and learning performance is better after sleep (Kurdziel, Duclos & Spencer, 2013).

While all of the justifications for making provision for sleep within ECEC are important to consider and potentially valid, it is notable that there is considerable individual variation in sleep and rest needs. None of the circumstances that necessitate daytime sleep or rest apply uniformly to all children and do not justify standard scheduling and/or mandating of a sleep/rest period. The NQS standard relating to sleep and rest clearly acknowledges variation in need, requiring consideration of children’s ages, developmental stages and individual circumstance. The key focus then is how and who determines individual need and the appropriate practice response. Theories about competence and agency of children to determine their own needs, what constitutes effective teaching and learning in the early years, and the relative positioning of the views of children, parents and educators become central in determining practice. In the next section, we reflect on historical and contemporary perspectives on ECEC philosophies, principles and practices and consider how these have shaped and influenced current sleep routines and practices for preschool children who attend ECEC centres today.

Current research evidence about the impacts of sleep/rest time in ECEC

There is a growing body of evidence that testifies to the importance of sleep in early childhood. Disrupted and shorter duration of night sleep is associated with obesity (Bell & Zimmerman, 2010), raised risk for accidents (Boto et al., 2012), poorer cognitive functioning and behavioural difficulties (Lam, Mahone, Mason & Scharf, 2011; Touchette et al., 2007). Establishing positive sleeping patterns early in life likely has long-term, health-promoting effects (Landhuis, Poulton, Welch & Hanko, 2008). A recent Australian study, for example, estimates the cost of sleep problems in children aged birth to seven years to be $27.5 million per annum in primary healthcare costs alone (Quach et al., 2013). Data from the Longitudinal Study of Australian Children (LSAC), estimated that almost 30 per cent of Australian children aged four–five experience sleep problems, ranging from mild to severe (Hiscock, Canterford, Ukoumunne & Wake, 2007). Children with such problems were 37 per cent more likely to sustain an injury requiring medical attention than children with no sleep problems (Hiscock et al., 2007).

Limited evidence on the impacts of ECEC practice on children’s sleep comes from just two studies conducted in Japan (Fukuda & Asaoka, 2004; Fukuda & Sakashita, 2002). Both compare the night-time sleep of children attending programs in which sleep time is mandated with those attending programs in which sleep is a choice. These studies found that mandated sleep time disrupted night sleep through both delayed onset and increased night waking (Fukuda & Sakashita, 2002), and that these effects endured beyond the ECEC years into the school years when mandatory sleep had ceased (Fukuda & Asaoka, 2004). These studies suggest that the impact of sleep practices in ECEC are neither transitory nor restricted to the ECEC years and warrant consideration. Additionally, a recent Australian study reports that the emotional climate declines significantly between active sessions and sleep time in ECEC centres (Pattinson, Staton, Smith & Thorpe, 2014). Sleep and rest, rather than serving to provide a period of rest, may paradoxically be a source of stress for both children and educators.

Acknowledging the holistic nature of child development in the early years, and the impact of the quality of ECEC services on children’s health, learning and wellbeing, in the immediate and long term, we assert that ECEC services have an important role to play in supporting the development of healthy sleep and rest practices.
We also recognise diversity in children’s individual and developmental needs, and families’ needs and preferences regarding sleep and rest practices in ECEC. In this final section, we explore some different perspectives on how high-quality sleep and rest practices in ECEC can be defined, with a view to supporting critical reflection and improved practice.

Meeting each child’s requirement for sleep and rest in Australian ECEC: Pedagogical approaches

For at least 60 years, a period of daytime sleep or rest has been documented as a routine part of the ECEC day in Australia. This practice is evident even in the older preschool age group (i.e. three–five years). Gahan’s (2005) history of Chislehurst Kindergarten in Queensland, for example, described sleep as an integral part of the daily program and one that was ‘not an extra’ regardless of the social background of the children attending. Similarly, a recent study of 130 kindergarten and long day care centres, also conducted in Queensland, found that 90 per cent of centres routinely scheduled sleep in their programs (Staton, 2015). These practices are not unique to Australia, but also occur internationally (Kurdziel et al., 2013; Ward et al., 2008; Watamura et al., 2002).

Although there has been continuity in the practice of allocating a sleep and rest time across 60 years, in the same period there has been considerable change in the underpinning theoretical understandings of childhood, children and the purpose of ECEC. Documents from the 1940s indicate a theoretical assertion that the role of an educator is to provide for the regulation of child behaviour and for imprinting a mark of routine to establish lifetime patterns.

[The object of the Nursery school] is to ensure the fullest development possible for each child by providing an environment which offers suggestions for normal and natural growth of body, mind, personality and character from the very beginning of life, during the first and most important years of life—as first impressions leave their mark for all time. The child ... learns to adjust himself normally and naturally to his environment, including other children and adults ... Nothing is forced, and children are never over-stimulated. Sleep and rest divide the morning from the afternoon (Principal of the Brisbane Kindergarten Training College, 1944, as cited in Byrne, 1986).

The historical rationale for inclusion of sleep and rest as an integral component of a preschool program follows logically from this assertion. The teacher, drawing on expert knowledge, would determine sleep time practices. The historical pedagogical practice is one of adult-led modelling of individual behavioural regulation as a means to achieve later self-regulation. This approach contrasts markedly with contemporary social constructivist pedagogical principles and practices that promote the child as a competent, active and equal agent in learning, within a community of learners comprising peers, educators and families (Sylva, Melhuish, Sammons, Siraj-Blatchford & Taggart, 2004). Through this philosophical lens, emphasis is placed on achieving a balance between child- and adult-led activities, recognising and responding to individual strengths, interests and needs, and supporting increasing child autonomy (Sylva et al., 2004). Within this philosophical context, children should be given opportunity to make inputs into any decision about their need for sleep and be provided with a range of defined alternative activities. Compulsion and/or whole group uniform practices that do not respond to either individual (Pattinson et al., 2014) or cultural needs (Sinclair et al., in press) within the Australian context would therefore seem incompatible with the underlying philosophies of the NQS (Figure 1). Though the national Early Years Learning Framework (EYLF) makes little specific mention of the role of sleep within the educational program, there is not a logical sequence from social constructivist or culturally based curriculum and pedagogy to practices that involve scheduled and/or mandated sleep time for all children without provision of alternative activities.

When set alongside the broader NQF, and standards and expectations for quality educational programs and practices, how are current practices that schedule and/or mandate sleep time explained? We suggest that the apparent misalignment between the quality standards and practices observed in many ECEC settings have two potential explanations. First, sleep and rest time may not be seen by some as a part of the educational program but rather as an activity that sits outside the curriculum objectives of the EYLF and, in contrast to the approach in the 1940s, not an integral focus for learning, but rather ‘time out’ from teaching and learning. Alternatively, sleep and rest time may be viewed as a response to a perception that all children in ECEC services should sleep or rest to promote their health, development, learning and wellbeing. This view appears to be stronger for children attending long day care services where hours of attendance are longer (Sinclair et al., in press). Within contemporary theoretical understandings, the voices of educators, parents and children are important in understanding the value of inclusion of sleep time in ECEC. We therefore examine their accounts.
Table 2. Historical and current perspectives of educators, parents and children regarding sleep and rest time in ECEC

<table>
<thead>
<tr>
<th>Perspectives</th>
<th>Historical (1940s–50s)</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Anne Clark (principal) insisted that a ‘worthwhile’ kindergarten programme should include a strong focus on the physical care of children—and that lunch and sleep routines were therefore not ‘an extra’, even for healthy, well-cared-for middle class children. Chiselhurst mothers … recalled Miss Clark strongly advocating the benefits of a cooked lunch and sleep at kindergarten—as much for them as for their children.</td>
<td>‘Really tricky with range of ages, balancing parent’s needs, children’s needs and staff needs. We tend to honour parents’ views—put as having a higher value than children’s views, because we still have to work with them.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘It’s a time when we get things done—play journals, art activities cleaned up or prepared, toilets are cleaned, kitchen cleaned, checklists ticked off.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘For some kids it is really important, and they tend to get really emotional otherwise.’</td>
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<tr>
<td></td>
<td></td>
<td>‘They (children) probably don’t like it, but you have to do things you don’t like, it’s part of the routine.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Some children have just grown out of nap time, but we need to keep our children quiet for the other rooms in the centre.’</td>
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</tbody>
</table>

| Parent       | Gahan (2005)           | Sinclair et al. (in press) |
|              | ‘Miss Clark saw to it that they had a little nap after lunch which I liked.’ | ‘When my child slept at Child Care she was then awake up until 10.00 pm at night and a lot of stress was involved.’ |
|              | Eileen indicated that she had approached Miss Clark to ask whether her daughter, Catherine, could have a short rest, as ‘she had never been a good day-sleeper, and Catherine had told me she was having to draw pictures on the ceiling (in her head) because she was bored at sleep time. Eileen recalled that Miss Clark politely pointed out, in response, that while she believed that all young children benefited from the opportunity to rest, she would get staff to ‘monitor Catherine’s mood at the rest-time’. On reflection, Eileen suspects, that Catherine probably had to rest like all the others, and she did not press the issue further, since she ‘trusted and valued’ Miss Clark’s advice and support. | ‘Nap time is part of the daily routine, however my son resents it as he hasn’t had to nap at home for a long time.’ |
|              |                        | ‘He is in school next year and needs to be able to stay awake all day without tiring too much.’ |
|              |                        | ‘I believe an hour or two sleeping every day is good for the development of children, mentally, and physically.’ |
|              |                        | ‘It gives me some more time with him in the evening while his younger sister is sleeping to do one-on-one activities—puzzles, games, Lego.’ |

|              | ‘I remember the sleep time and a big room full of small beds in rows. I can’t imagine how, but thirty children went to sleep simultaneously. I certainly feel it happened gently and we woke up aware of others stirring but not crying. We used to sing a medley of songs afterwards, before “going home” time.’ | ‘You have to lay down and be really quiet.’ |
|              | ‘I remember rest time on the canvas stretchers and the smell of the stretchers. It seemed as though there was an enormous amount of space between me and the ceiling of the huge room. You had to lie on your bed and be deathly quiet. I had a little crocheted rug on my bed, and I remember poking my fingers up through the holes pretending they were puppets to keep myself entertained.’ | ‘We do massage … We do massage and relaxation sometimes.’ |
|              |                        | ‘You just rest all the time because you’re not allowed to play.’ |
|              |                        | ‘They [teachers] don’t make you. You can just sit up or lay down or sleep or rest anything.’ |
|              |                        | ‘I like having rest time.’ |
|              |                        | ‘If you can’t get to sleep they [teachers] pat you … they are trying to help you get to sleep.’ |
|              |                        | ‘They [teachers] just clean.’ |

Meeting each child’s requirement for sleep and rest in Australian ECEC: The experiences of educators, parents and children

The views of educators, parents and children from across the 60-year period present a picture of diverse responses to sleep and rest time in the ECEC setting. In Table 2, we present a representation of quotes from Gahan’s interviews with adults who were various teachers, parents and children attending Chiselhurst Kindergarten in the 1940s and 1950s (Gahan, 2005) against recent studies of educators (Inglis, Staton, Smith, Pattinson & Thorpe, 2013), parents (Sinclair et al., in press) and children (Nothard et al., 2015). Together these accounts indicate that sleep and rest time, both historically and currently, has received mixed reaction from educators, parents and children. The historical accounts from Chiselhurst provide a picture of educator-led practice that, while acceptable to some parents and children, was to others reluctantly accepted and privately contested. More recent accounts present open ambivalence and contestation. Current educators’ accounts are particularly interesting in their...
description of sleep and rest time. They present a picture of competing demands in which the needs of educators, parents and children are often in conflict. Educators variously describe the scheduling of sleep and rest for children as a ‘tricky’ balance of competing needs, ‘a time to get things done’, a time for educators to ‘de-stress’ and a time for children to sleep or rest (Inglis et al., 2013). Issues emerge when educators’, parents’ and children’s needs and expectations are pitched against each other. Interestingly, one contemporary educator described the child’s view as the lowest priority. Operator and/or educator needs also seem to be given higher priority than children’s needs and preferences in some centres. Parent and child accounts reflected the sense that many do not want routine scheduling of a sleep and rest time. Sinclair and colleagues (in press), in their analysis of 750 parent accounts from the E4Kids data reported that 80 per cent of parents, if given the choice, would prefer that their three- to six-year-olds not sleep in their ECEC program.

Some parents reported negative impacts stemming from the practice of mandated sleep time. One factor to emerge is the distinction parents make between sleep and rest with many accepting the need for a quieter period during the day but not the requirement of sleep for children who have ceased to habitually nap at home. Children’s accounts, both historical and current, provide descriptions that depict them managing sleep time with imagination and subversive games (e.g. playing under the blankets; positioning themselves near windows or bookshelves; drawing pictures on the ceiling in their mind). Children’s accounts of opportunity to exercise choice and to engage in alternative activities to sleeping, allowed in some but not all contemporary centres, were more positive. This included allowing children to make informed decisions about their need for sleep or rest on a daily basis, proactive teacher-led approaches such as group massage and mindfulness sessions to support rest and relaxation, and differentiated activities (i.e. sleep, rest and/or ‘quiet’ alternative activities) to meet diverse child and family needs (Nothard et al., 2015). How well contemporary practices in sleep and rest time align with the NQF—that promotes the agency and rights of the child, inclusive and responsive educational programs, and genuine partnership with families—is a question clearly raised by the accounts of the teachers, parents and children.

Awakening the debate about appropriate provisions for each child’s sleep, rest and relaxation

The NQS provides a broad and flexible framework for what constitutes positive sleep/rest practices and identifies some general expectations regarding the provision of ‘opportunities for sleep, rest and relaxation’ (NSW Government, 2011) for all children in ECEC, regardless of age. Emphasis is placed on flexible practices that are sensitive and responsive to the individual need for sleep, rest and/or relaxation throughout the day. Within the context of performance-based standards, educators are expected to draw on contemporary community standards, to consult with families and to exercise professional judgement to determine appropriate and responsive sleep and rest practices. Compliance with this standard is determined through an Assessment and Ratings Process based on external observation of practice, conversation with educators and review of policy and practice documentation.

In what may constitute a landmark case in this area, a centre’s overall rating was recently determined on the basis of their sleep and rest practices. According to ACEQA (2013) documentation, an ECEC centre’s sleep and rest practices were initially rated as ‘Meeting the NQS’, leading to an overall centre rating of ‘Meeting the NQS’. The centre believed their sleep practices were of a higher quality and sought a first-tier review. Upon examination of the assessor’s original documentation, and consideration of current community standards, the State Regulatory Authority determined the centre’s sleep practices did not meet the NQS standard. The sleep practices were deemed to be overly structured because all children (sleepers and non-sleepers) were required to rest for approximately 25 minutes, during a scheduled sleep period, with no alternative activities permitted. The centre’s rating for this area of practice was amended to ‘Working towards the NQS’, leading to a subsequent reduction in the overall centre rating (ACECQA, 2013). The centre contested this decision. Upon receipt of evidence of an updated sleep and rest policy and approach, developed in consultation with families, that required children to rest for a ‘short’ (undefined) period and then be offered quiet activities, the centre was found to meet the requirement. The final outcome was that the original rating was reinstated (ACECQA, 2013).

Provision for sleep/rest practices in Australian ECEC programs are specified by the NQS as integral to programs. The NQS presents a holistic and integrated perspective on what constitutes quality practice in EEC, and the various standards, including those on sleep and rest, are interrelated and meant to be read together. Further, as the EYLF definition of ‘curriculum’ infers, sleep and rest time is considered to be part of the educational program and the EYLF principles and pedagogical practices are seen to apply to sleep, rest and relaxation. This includes, for example, the view of children as active participants and decision makers within the educational program, the expectation that educators will work in partnership with families and respect diversity in family views, needs and preferences. Links can also be made to the EYLF learning outcomes including the broad focus on supporting early learning and successful transition to school, and to some specific areas such as ‘children taking increasing responsibility for their own health and physical wellbeing’ (DEEWR, 2009; Outcome 3.2).
To date there is a greater silence and larger challenge to practice with regard to the provision of relaxation. In our definition of relaxation provided in Table 1, we do not infer that relaxation necessarily implies sleep or rest but rather indicate this as distinct. For many individuals, including young children, relaxation is achieved actively rather than passively. Going for a walk or climbing a tree may be a way to ‘let off steam’ and relax. Consideration of individual perspectives on what is relaxing in the context of ECEC presents a diversity of individual possibilities for enactment of the NQS. The means by which appropriate provision for children’s relaxation is made is a subject for ongoing discussion, data collection and reflection.

**Conclusion**

Physical and emotional wellbeing underpin effective learning. Sleep, rest and relaxation play a central role in attaining positive wellbeing and are, therefore, rightly recognised by the NQS as integral to ECEC programs. How sleep, rest and relaxation are best achieved in ECEC settings is a ‘really tricky’ problem. There is a need for debate, discussion, data collection and documentation of consultative solutions to ensure that sleep/rest practices best serve children, families and educators. Our current understanding of appropriate practice is limited and subject to physical, structural, economic and cultural constraints. There is however evidence of practitioners facing the elephant in the room. In conclusion we provide an example of one educator’s response (Figure 2).

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**Figure 2. A case example of one educator’s response to addressing sleep/rest within their preschool classroom**
References


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Grade repetition risk for boys in early schooling in Queensland, Australia

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James Cook University

A SIGNIFICANT GAP EXISTS in the Australian literature in the disproportionate over-representation of boys in grade repetition in early schooling. The current study aims to contribute to the evidence-based research in grade repetition in early schooling in Australia by drawing on, and offering an analysis of, data from Queensland’s state education department, the Department of Education, Training and Employment (DETE). Descriptive statistics and relative risk ratio were the methods employed to analyse the data and assess the relative risk of grade repetition for boys. Findings show that boys are over-represented in grade repetition in the year prior to schooling and in all year levels of early schooling (Prep to Year 3). Contributing factors to the disproportionate over-representation of boys in early grade repetition are discussed and recommendations for future policy and practice are suggested.

Introduction

Grade repetition, also called ‘repeating’ a year level in Australia (Anderson, 2008), or ‘grade retention’ in the United States (Brophy, 2006), refers to an intervention practice whereby students ‘repeat’ a year level at school rather than being promoted to the next year level along with their same-age peers. It has been used in schools worldwide (Brophy, 2006), including Australia, as a remedy to address school failure, or at the preschool level, students’ ‘unreadiness’ for school (Anderson, 2008). While a considerable body of research exists on grade repetition in the United States, there is a dearth of available Australian research on grade repetition. Further, there is no publicly available systematic data collected on grade repetition in any level of schooling in Australia. Regardless of the lack of interest in grade repetition in Australia, McGrath argues that the practice has been ‘widely accepted in Australian schools’ (2006, p. 39). Despite its wide acceptance, decades of research in the United States has shown that grade repetition offers few benefits for students (Cannon & Lipscomb, 2011; Hong & Raudenbush, 2005; Hong & Yu, 2006; Hughes, Chen, Thoemmes & Kwok, 2010; Jimerson, 2001, 2004; McGrath, 2006) and may be harmful (Jimerson, 2001, 2004). Thus, this paper makes a significant contribution to the relatively unresearched area of grade repetition in Australian schools. In particular, the study examines the most recent grade repetition data drawn from the Queensland Government’s Department of Education, Training and Employment’s (DETE) in-house database (2013a) and aims to show that:

1. Grade repetition as an intervention practice exists in Queensland state schools.
2. Boys are more at risk of being repeated than girls in the early years of schooling.

The paper first considers the available literature on grade repetition and a group of students more often repeated in early schooling: boys. The literature is followed by the methodology, findings, discussion and conclusion.

Review of literature

The first section of the literature considers the possible effects of grade repetition on student achievement and social and emotional adjustment. The second section discusses grade repetition in preschool and early schooling, and the third section discusses one group of students more often repeated: boys.

Effects of grade repetition

Grade repetition has been employed by educators and policy-makers worldwide as an intervention practice to improve educational outcomes for low-achieving students or, in the case of preschool students, better prepare them
for school (UNESCO, 2005). Despite decades of research mainly from the United States, limited long-term support has been found for this widely used intervention practice (Hong & Raudenbush, 2005; Hong & Yu, 2006; Hughes et al., 2010; Jimerson, 2001, 2004). Jimerson (2004), who has researched extensively in the area of grade repetition in the United States, argues that results from decades of research advise against grade repetition. Findings from meta-analyses that provided outcomes of 83 published studies between 1925 and 1999, including students retained at the preschool level, ‘demonstrate[d] consistent negative effects of grade retention on subsequent academic achievement’ (Jimerson, 2001, pp. 50–51). In considering all areas of socio-emotional adjustment (social, emotional, behavioural, attitude toward school and attendance), the meta-analyses similarly showed a negative effect.

The National Association of School Psychologists (NASP) in the United States further considered numerous reviews on grade repetition. In its most recent review, the NASP concluded that grade retention has ‘limited empirical support’ (2011, p. 1). In particular, the ‘unanimous conclusion from these reviews is that grade retention offers few, if any, benefits to the retained student and may increase the retained child’s risk for poor school outcomes, including dropping out of school prior to high school graduation’ (NASP, 2011, p. 1). Thus, grade repetition, as an intervention practice to support children’s learning at school, has limited support from professional bodies and research.

Grade repetition in preschool and early schooling

While grade repetition is practised at the preschool level and in early schooling in Australia (McGrath, 2006) and the United States (Cannon & Lipscomb, 2011), it has been shown to offer few benefits regarding young students’ academic achievement or socio-emotional adjustment. Regarding academic achievement, Hong and Yu (2006) and Xia and Kirby (2009) found that repetition in early grades shows no evidence of benefits to retainees’ cognitive development or later academic achievement. Other research (Brophy, 2006; Jimerson, 2004) has shown that grade repetition may have a negative effect on young students’ social and emotional adjustment, i.e. their self-esteem, peer relationships and attitudes towards school.

The National Association of Early Childhood Specialists in State Departments of Education (NAECSSDE), one of the more prominent educational bodies in the United States, issued a position statement, endorsed by the National Association for the Education of Young Children (NAEYC), the most influential early childhood body in the United States, relating to developments in early childhood education in the United States (2000). The NAECSSDE stated that early childhood policies and practices that promote preschool retention and related practices such as delayed entry assign ‘the burden of responsibility to the child, rather than the program’, place ‘the child at risk of failure, apathy towards school and demoralization’, fail ‘to contribute to quality early childhood education’ and ‘label children as failures at the outset of their school experience’ (2000, p. 4). Ten years later, at the conclusion of their research, Cannon and Lipscomb (2011) similarly warned that grade repetition in the early years of schooling is a ‘negative academic outcome early in children’s educational careers’ (p. 11), and more often includes particular groups of children. Such children more likely to be repeated include those from low-income and ethnic minority groups (Hong & Raudenbush, 2005). In Australia, these include Aboriginal and Torres Strait Islander students (DETE, 2013a), younger children (Dockett & Perry, 2007; McGrath, 2006) and boys (Cannon & Lipscomb, 2011; Hong & Raudenbush, 2005; McGrath, 2006). This paper will focus the discussion of grade repetition on boys.

Groups of children more likely to be repeated: Boys

Research in the United States (Cannon & Lipscomb, 2011; Hong & Raudenbush, 2005) and Australia (Anderson, 2008) indicates that boys more often repeat preschool and early schooling than girls. Mortenson states that for every 100 girls who repeat Kindergarten, which is the first year of elementary school in the United States, 194 boys repeat (2006). The available data in Australia, thought limited, reveals similar findings (DETE, 2013a). Several explanations have been offered as to why boys are more often repeated at preschool and in early schooling. These explanations often relate to school readiness.

Readiness for school has been defined in different ways. Earlier conceptualisations of school readiness focused solely on the student and the student’s need to have particular attributes to be considered school-ready (Meisels, 1999). Within such conceptualisations, however, the absence of particular attributes may lead to deficit beliefs about the students or the students’ background, which may in turn influence decisions to repeat students at preschool or delay their entry into school until they are ‘ready’. More recent conceptualisations developed school readiness to include, not only child readiness, but also school readiness and family support (ARACY, 2007). Drawing on such understandings of school readiness, the Early Development Instrument (EDI), initially devised in Canada, was developed in Australia as the Australian Early Development Index or AEDI to assess how well children are prepared for school (CCCH, 2007). Dockett and Perry (2013) warn, however, that while there has been a shift in thinking regarding school readiness models, ‘there remains a strong focus on the preparedness of individual children to start school’ (p. 167). More recent conceptualisations of preparing children for school emphasise culturally and contextually relevant transition programs that focus on relationship building (Dockett & Perry, 2013) rather than requiring children to have particular ‘school-ready’ attributes.
When children are assessed within the concept of school readiness, groups of children such as boys are likely to be considered ‘less ready’ for school than girls (Ackerman & Barnett, 2005; McGrath, 2006). According to Connolly (2004), this may be because they are less likely than girls to display particular ‘school ready attributes’ such as cooperation, obedience and diligence, which may be favoured by some early childhood educators. Evers, Brendgen and Borge (2010) have noted that boys ‘tend to exhibit significantly higher levels of antisocial behaviour than girls’ (p. 847). In one Australian study, Childs and McKay (2001) noted that the ‘lack of self-regulation’ of five-year-old boys at school appeared to be ‘determined by gender attributions’ (p. 312). Alloway (1995), who has researched extensively in the area of gender and preschool, argues that young boys’ unacceptable and aggressive behaviours at school may be related to the dominant forms of masculinity in our society. Such forms of masculinity, based on ‘violent domination and control’, are widely accessible to most boys through media, toys and electronic games (Alloway, 1995, p. 82). Given that many people consider such forms of masculinity as ‘natural’ and ‘unproblematic’, most boys will have already taken up these forms of masculinity to some degree by the time they enter preschool (Davies, 1989). Such forms of masculinity are likely to be at odds with the practices of schooling that favour cooperation, obedience, diligence and adult control (Connolly, 2004). Therefore, when the focus is on children to have particular ‘school-ready’ attributes, boys, who may have taken up these dominant forms of masculinity, are more likely to display attributes that are at odds with particular qualities that position children as ‘ready’ for school, and are thus repeated at preschool.

As a significant gap exists in the Australian literature regarding the disproportionate over-representation of boys in grade repetition in early schooling, this study examines the most recent grade repetition data drawn from the in-house database of the Queensland Education Department (DETE, 2013a). The next section will discuss how the data from DETE (2013a) was used to show that grade repetition as an intervention practice exists in Queensland state schools, and how the risk of boys being repeated compared to girls in the early years of schooling was calculated.

Methodology

Following a formal application to DETE and ethics approval from James Cook University, the methodological approach examined a subset of an existing large-scale data set on grade repetition drawn from the in-house database of DETE, Corporate Data Warehouse (2013a). The secondary data includes DETE’s most recent grade repetition data from 1997 to 2012 and was collected in late 2013. Since the study focused on grade repetition in early schooling, data collection was limited to students aged five to eight years; students most likely to be in year levels Prep (Queensland’s pre-schooling year) to Year 3, which are the officially recognised early childhood education years in Queensland state schools (QSA, 2006). Data was collected by DETE according to students’ ages. Therefore, except for students aged five years who would be in a Prep class, the equation of student age to year level can only be approximated.

Descriptive statistics were used to highlight overall trends in grade repetition in the early years of schooling, and particularly in the Prep year. Data analysis focused initially on grade repetition rates for students aged five years in Queensland state schools, to identify trends in grade repetition for students in the year prior to school. Following an initial analysis of the data, three primary measures, through which boys and girls can be more reliably compared, were employed to analyse the over-representation and proportional discrepancy between these two groups of students. This was done through the calculation of a series of indexes which included the composition index, the risk index and the relative risk ratio (Graham, 2012). The composition index is the percentage of students within a category represented (e.g. composition index of repeated boys) and is calculated by dividing the number of repeated boys by the total number of students repeated in that category. The risk index is the percentage of students within a specific category and is calculated by dividing the number of students (e.g. repeated boys) by the total number of possible students in that category (e.g. boys). The risk indexes, used to compare the risk of being repeated between groups (boys and girls), is calculated by dividing the risk index of one group by another (e.g. the risk index for boys divided by the risk index for girls).

The study is limited to the collection of data groups that are currently the focus of attention for DETE. The data, therefore, does not include students who attend non-government schools in Queensland, nor does it include schools in other Australian states or territories. The study is also limited to the collection of data for groups that are the focus of the study, i.e. boys and girls aged five to eight years. The next section details the findings of the data on grade repetition in early schooling drawn from DETE.

Findings

The data highlights particular trends in grade repetition in early schooling. The trends included the percentage of repeated students aged five years, the percentage of repeated boys and girls aged five years, the risk of grade repetition for boys and girls aged five years and the grade repetition risk for boys and girls aged five to eight years. Findings related to each section will be presented in turn.

Repeated students aged five years

Table 1 shows the overall trend in grade repetition for the last 15 years in Queensland state schools. It shows the total number of students aged five years enrolled for each year from 1997 to 2012 along with the number of
repeated students for each year. These numbers were used to calculate the percentage of repeated students for each year from 1997 to 2012. To readily view the overall trend in grade repetition, Figure 1 shows the percentage of repeated students aged five years in Queensland state schools from 1997 to 2012.

Table 1. Total numbers; numbers repeated and percentage of students aged five years repeated in Queensland state schools, 1997–2012 (DETE, 2013a)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total number</th>
<th>Number repeated</th>
<th>% repeated</th>
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<tr>
<td>1997</td>
<td>35 625</td>
<td>262</td>
<td>0.74</td>
</tr>
<tr>
<td>1998</td>
<td>36 920</td>
<td>401</td>
<td>1.09</td>
</tr>
<tr>
<td>1999</td>
<td>37 139</td>
<td>580</td>
<td>1.56</td>
</tr>
<tr>
<td>2000</td>
<td>37 487</td>
<td>581</td>
<td>1.55</td>
</tr>
<tr>
<td>2001</td>
<td>36 947</td>
<td>551</td>
<td>1.49</td>
</tr>
<tr>
<td>2002</td>
<td>36 607</td>
<td>591</td>
<td>1.61</td>
</tr>
<tr>
<td>2003</td>
<td>38 104</td>
<td>642</td>
<td>1.68</td>
</tr>
<tr>
<td>2004</td>
<td>38 389</td>
<td>661</td>
<td>1.72</td>
</tr>
<tr>
<td>2005</td>
<td>38 822</td>
<td>613</td>
<td>1.58</td>
</tr>
<tr>
<td>2006</td>
<td>38 905</td>
<td>665</td>
<td>1.71</td>
</tr>
<tr>
<td>2007</td>
<td>24 579</td>
<td>729</td>
<td>2.97</td>
</tr>
<tr>
<td>2008</td>
<td>37 759</td>
<td>410</td>
<td>1.1</td>
</tr>
<tr>
<td>2009</td>
<td>39 039</td>
<td>365</td>
<td>0.9</td>
</tr>
<tr>
<td>2010</td>
<td>40 462</td>
<td>447</td>
<td>1.1</td>
</tr>
<tr>
<td>2011</td>
<td>42 571</td>
<td>502</td>
<td>1.2</td>
</tr>
<tr>
<td>2012</td>
<td>44 251</td>
<td>505</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Students who are repeating a year level at age five would almost certainly be in Prep or Preschool, as it was called before 2007 (QSA, 2006). The percentage of repeated students aged five years steadily increased to 2006, almost doubled in 2007 with the introduction of the Prep year to replace Preschool in Queensland state schools, and has remained at an average of 1.1 per cent from 2008 to 2012.

Figure 1. Percentage of students aged five years repeated in Queensland state schools, 1997–2012 (DETE, 2013a)

Repeated boys and girls aged five years
Table 2 shows the total numbers of boys and girls aged five years enrolled in Queensland state schools, along with the numbers of repeated boys and girls for each year from 1997 to 2012. These numbers were used to calculate the percentage of repeated students. To readily view the trend in grade repetition, Figure 2 shows the percentage of repeated boys and girls aged five years in Queensland state schools for each year between 1997 and 2012.

Table 2. Total numbers; numbers repeated and percentage of students, boys and girls aged five years, Queensland state schools, 1997–2012 (DETE, 2013a)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total number of boys</th>
<th>Number of repeated boys</th>
<th>% of repeated boys</th>
<th>Total number of girls</th>
<th>Number of repeated girls</th>
<th>% of repeated girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>18 230</td>
<td>159</td>
<td>0.87</td>
<td>17 395</td>
<td>103</td>
<td>0.59</td>
</tr>
<tr>
<td>1998</td>
<td>18 970</td>
<td>274</td>
<td>1.44</td>
<td>17 950</td>
<td>127</td>
<td>0.71</td>
</tr>
<tr>
<td>1999</td>
<td>19 141</td>
<td>408</td>
<td>2.14</td>
<td>17 998</td>
<td>172</td>
<td>0.96</td>
</tr>
<tr>
<td>2000</td>
<td>19 419</td>
<td>390</td>
<td>2.01</td>
<td>18 068</td>
<td>191</td>
<td>1.06</td>
</tr>
<tr>
<td>2001</td>
<td>19 043</td>
<td>387</td>
<td>2.03</td>
<td>17 884</td>
<td>164</td>
<td>0.92</td>
</tr>
<tr>
<td>2002</td>
<td>18 708</td>
<td>412</td>
<td>2.20</td>
<td>17 899</td>
<td>179</td>
<td>1.00</td>
</tr>
<tr>
<td>2003</td>
<td>20 140</td>
<td>469</td>
<td>2.33</td>
<td>17 964</td>
<td>173</td>
<td>0.96</td>
</tr>
<tr>
<td>2004</td>
<td>20 516</td>
<td>461</td>
<td>2.25</td>
<td>17 873</td>
<td>200</td>
<td>1.12</td>
</tr>
<tr>
<td>2005</td>
<td>20 805</td>
<td>441</td>
<td>2.12</td>
<td>18 017</td>
<td>172</td>
<td>0.95</td>
</tr>
<tr>
<td>2006</td>
<td>20 872</td>
<td>459</td>
<td>2.20</td>
<td>18 033</td>
<td>206</td>
<td>1.14</td>
</tr>
<tr>
<td>2007</td>
<td>13 837</td>
<td>499</td>
<td>3.61</td>
<td>10 742</td>
<td>230</td>
<td>2.14</td>
</tr>
<tr>
<td>2008</td>
<td>19 403</td>
<td>283</td>
<td>1.50</td>
<td>18 356</td>
<td>127</td>
<td>0.70</td>
</tr>
<tr>
<td>2009</td>
<td>19 932</td>
<td>273</td>
<td>1.40</td>
<td>19 107</td>
<td>92</td>
<td>0.50</td>
</tr>
<tr>
<td>2010</td>
<td>20 810</td>
<td>326</td>
<td>1.60</td>
<td>19 652</td>
<td>121</td>
<td>0.60</td>
</tr>
<tr>
<td>2011</td>
<td>21 992</td>
<td>332</td>
<td>1.50</td>
<td>20 649</td>
<td>170</td>
<td>0.80</td>
</tr>
<tr>
<td>2012</td>
<td>22 912</td>
<td>357</td>
<td>1.60</td>
<td>21 339</td>
<td>148</td>
<td>0.70</td>
</tr>
</tbody>
</table>
Figure 2 clearly shows, that for each year between 1997 and 2012, a higher percentage of boys than girls aged five years were repeated in Queensland state schools. In most cases, the percentage of repeated boys was double the percentage of repeated girls regardless of whether the percentages increased or decreased.

Figure 2. Percentage of girls/boys aged five years repeated in Queensland state schools, 1997–2012 (DETE, 2013a)

Grade repetition risk for boys and girls aged five years

Tables 3 to 5 represent repeated boys and girls aged five years in Queensland state schools from 1997 to 2012. Table 3 shows that, while boys represented 52.13 per cent of the total state-wide enrolment of students aged five years, they represented 69.60 per cent of repeated students.

Table 4 shows composition indexes for repeated boys and girls aged five years in Queensland state schools from 1997 to 2012. In Table 4, the composition index percentages for repeated boys were higher than the composition index percentages for repeated girls for each year level (1997–2012) as well as the percentage of total enrolments for boys in Table 3.

Table 5 shows the relative risk ratios calculated from the risk ratios of repeated boys and girls aged five years in Queensland state schools from 1997 to 2012. It shows that, for each year from 1997 to 2012, boys aged five years were at greater risk of being repeated in Queensland state schools than girls aged five years.

Table 3. Repeated students; boys and girls aged five years repeated in Queensland state schools, 1997–2012

<table>
<thead>
<tr>
<th>Repeating demographics for students aged five years, 1997–2012</th>
<th>Total enrolments</th>
<th>Students repeated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>% of total enrolment</td>
</tr>
<tr>
<td>Boys</td>
<td>314 660</td>
<td>52.13</td>
</tr>
<tr>
<td>Girls</td>
<td>288 926</td>
<td>47.87</td>
</tr>
<tr>
<td>Total</td>
<td>603 586</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 4. Composition indexes of repeated students; boys and girls aged five years in Queensland state schools, 1997–2012

<table>
<thead>
<tr>
<th>Years repeated</th>
<th>Total repeated</th>
<th>All students aged five years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Composition index %</td>
</tr>
<tr>
<td>1997</td>
<td>262</td>
<td>3.09</td>
</tr>
<tr>
<td>1998</td>
<td>401</td>
<td>4.71</td>
</tr>
<tr>
<td>1999</td>
<td>580</td>
<td>6.82</td>
</tr>
<tr>
<td>2000</td>
<td>581</td>
<td>6.83</td>
</tr>
<tr>
<td>2001</td>
<td>551</td>
<td>6.48</td>
</tr>
<tr>
<td>2002</td>
<td>591</td>
<td>6.95</td>
</tr>
<tr>
<td>2003</td>
<td>642</td>
<td>7.55</td>
</tr>
<tr>
<td>2004</td>
<td>661</td>
<td>7.77</td>
</tr>
<tr>
<td>2005</td>
<td>613</td>
<td>7.21</td>
</tr>
<tr>
<td>2006</td>
<td>665</td>
<td>7.82</td>
</tr>
<tr>
<td>2007</td>
<td>729</td>
<td>8.57</td>
</tr>
<tr>
<td>2008</td>
<td>410</td>
<td>4.82</td>
</tr>
<tr>
<td>2009</td>
<td>365</td>
<td>4.29</td>
</tr>
<tr>
<td>2010</td>
<td>447</td>
<td>5.25</td>
</tr>
<tr>
<td>2011</td>
<td>502</td>
<td>5.90</td>
</tr>
<tr>
<td>2012</td>
<td>505</td>
<td>5.94</td>
</tr>
<tr>
<td>Total</td>
<td>8505</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 5. Relative risk ratios of repeated students; boys and girls aged five years in Queensland state schools, 1997–2012

<table>
<thead>
<tr>
<th>Years repeated</th>
<th>All students aged five</th>
<th>Risk index %</th>
<th>Relative risk ratio %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td>0.05</td>
<td>0.03</td>
<td>1.7</td>
</tr>
<tr>
<td>1998</td>
<td>0.09</td>
<td>0.04</td>
<td>2.2</td>
</tr>
<tr>
<td>1999</td>
<td>0.13</td>
<td>0.06</td>
<td>2.2</td>
</tr>
<tr>
<td>2000</td>
<td>0.12</td>
<td>0.07</td>
<td>1.7</td>
</tr>
<tr>
<td>2001</td>
<td>0.12</td>
<td>0.06</td>
<td>2.0</td>
</tr>
<tr>
<td>2002</td>
<td>0.13</td>
<td>0.06</td>
<td>2.2</td>
</tr>
<tr>
<td>2003</td>
<td>0.15</td>
<td>0.06</td>
<td>2.5</td>
</tr>
<tr>
<td>2004</td>
<td>0.15</td>
<td>0.07</td>
<td>2.1</td>
</tr>
<tr>
<td>2005</td>
<td>0.14</td>
<td>0.06</td>
<td>2.3</td>
</tr>
<tr>
<td>2006</td>
<td>0.14</td>
<td>0.07</td>
<td>2.0</td>
</tr>
<tr>
<td>2007</td>
<td>0.14</td>
<td>0.08</td>
<td>1.7</td>
</tr>
<tr>
<td>2008</td>
<td>0.09</td>
<td>0.04</td>
<td>2.2</td>
</tr>
<tr>
<td>2009</td>
<td>0.09</td>
<td>0.03</td>
<td>3.0</td>
</tr>
<tr>
<td>2010</td>
<td>0.10</td>
<td>0.04</td>
<td>2.5</td>
</tr>
<tr>
<td>2011</td>
<td>0.10</td>
<td>0.06</td>
<td>1.6</td>
</tr>
<tr>
<td>2012</td>
<td>0.11</td>
<td>0.05</td>
<td>2.2</td>
</tr>
<tr>
<td>Total</td>
<td>1.85</td>
<td>0.88</td>
<td>2.1</td>
</tr>
</tbody>
</table>

Grade repetition risk for boys and girls aged five to eight years

Tables 6 to 8 represent repeated boys and girls aged five to eight years in Queensland state schools in 2012. Table 6 shows that, while boys represented 51.77 per cent of the total state-wide enrolment of students aged five to eight years, they represented 66.63 per cent of repeated students.

Table 7 shows the composition indexes for repeated boys and girls aged five to eight years in Queensland state schools in 2012. While the total composition index percentage for repeated boys at 66.63 per cent was approximately twice as high as the total composition index percentage for repeated girls (37.37 per cent), the composition index percentages decreased for boys and increased for girls with increasing age. However, the composition index percentages for boys were still higher than girls at each age level from five to eight years.

Table 8 shows the relative risk ratios calculated from the risk ratios of repeated boys and girls aged five to eight years in Queensland state schools in 2012. It shows that, as a group of students aged five to eight years, boys were at twice the risk of being repeated in Queensland state schools in 2012 than girls. Further, the relative risk ratios decreased at each age level for boys from five to eight years. By eight years, the relative risk for boys being repeated was the same as girls.

The next section discusses the findings of the data set.

Table 6. Repeated students; boys and girls aged five to eight years in Queensland state schools, 2012

<table>
<thead>
<tr>
<th>Repeating demographics for students aged 5–8 years, 2009</th>
<th>Total enrolments</th>
<th>Students repeated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>% of total enrolment</td>
</tr>
<tr>
<td>Boys</td>
<td>89 181</td>
<td>51.77</td>
</tr>
<tr>
<td>Girls</td>
<td>83 074</td>
<td>48.23</td>
</tr>
<tr>
<td>Total</td>
<td>172 255</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 7. Composition indexes of repeated students; boys and girls aged five to eight years in Queensland state schools, 2012

<table>
<thead>
<tr>
<th>Students aged 5–8 years</th>
<th>Total repeated</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Composition index %</td>
<td>N</td>
</tr>
<tr>
<td>5 years</td>
<td>505</td>
<td>53.50</td>
<td>357</td>
</tr>
<tr>
<td>6 years</td>
<td>235</td>
<td>24.89</td>
<td>149</td>
</tr>
<tr>
<td>7 years</td>
<td>126</td>
<td>13.35</td>
<td>78</td>
</tr>
<tr>
<td>8 years</td>
<td>78</td>
<td>8.26</td>
<td>45</td>
</tr>
<tr>
<td>Total</td>
<td>944</td>
<td>100</td>
<td>629</td>
</tr>
</tbody>
</table>
Discussion

Figure 1 and Table 1 show that the percentage of repeated students aged five years more than doubled from 0.72 per cent in 1997 to 1.72 per cent in 2006. In 2007, it dramatically increased to 2.97 per cent, after which, in 2008, it declined just as dramatically to almost a third at 1.1 per cent. It has remained at around this level until 2012. These trends may be explained in several ways.

The gradual increase in grade repetition from 1997 to 2006 may be the result of increasing concerns by early childhood educators regarding accountability and the need for children to have particular ‘school-ready’ attributes (ACARA, 2013). The association between increases in accountability for educators and grade repetition rates has also been similarly noted in the United States (Reback, 2008).

The dramatic rise in 2007 and subsequent decline in 2008 of repeated students, however, may be related to other factors. The sharp rise in repeated students in 2007 may be connected to the introduction, by DETE, of a full-time pre-schooling year known as the Preparatory or ‘Prep’ year in 2007, requiring children to be six months older. As some parents voiced concerns over their children’s readiness for school with the new requirement, the education department in Queensland at the time, the Department of Education, Training and the Arts (DETA), offered parents a ‘once off’ opportunity to repeat their child in the first Prep year in 2007 to alleviate their concerns (Townsville North and West District Office, DETA, Education Queensland, 2006). Also, with the introduction of the National Assessment Program (NAP) by the Australian Curriculum, Assessment and Reporting Authority (ACARA, 2014), some early childhood educators’ concerns over children’s readiness for school may have been heightened, leading to recommendations that students considered ‘unready’ for school repeat the new Prep year. For whichever reason, the dramatic increase in repeated students aged five years in 2007 indicates that, when offered the opportunity to repeat their child in Prep, many parents, who have the final say in whether their child repeats preschool or not, availed themselves of the opportunity for their child to have a second year at preschool to ensure their child was ‘school-ready’. When the emphasis is on school readiness, children who are considered ‘not ready’, either by parents or teachers, are more likely to be repeated. In contrast, when the emphasis is on transition programs that focus on children’s strengths rather than their need to have particular ‘school-ready’ attributes (DETE, 2014; Dockett & Perry, 2013), fewer children are likely to repeat preschool.

The fall in grade repetition rates since 2008 may be explained by the introduction of several national policies and initiatives to assist early childhood educators, communities and parents in young children’s successful transition to school. Since 2009, the Australian Early Development Instrument (AEDI), renamed the Australian Early Development Census (AEDC) in 2014 (AEDC, 2014), has provided data on children’s readiness for school. The AEDI provides data on a community’s children in five key areas of early childhood development, enabling early childhood educators to identify whether children in particular communities are on track when compared to other children in Australia, to provide support in preparing them for school (CCCH, 2007). Similarly, the introduction of the Early Years Learning Framework (EYLF) in 2009 (DEEWR, 2009), along with the National Quality Framework (DEEWR, 2011), may have further assisted in providing universal access to, and raising the quality of, Australian early education and care (ACECQA, 2012). This may then have better prepared children for school and decreased the need for them to repeat preschool. Finally, the development of the Australian Curriculum and its Foundation Year (ACARA, 2010) may have also assisted children in their transition to school, thus decreasing the need for them to repeat preschool. Education Queensland’s emphasis on children’s transition to school (DETE, 2014) rather than on being ‘ready’ for school may further decrease the need for children to be repeated at preschool.

Following the introduction of the Prep year in 2007, there has been an average of 1.1 per cent of students aged five years repeated in Queensland state schools from 2008 to 2012. While students aged five years would almost certainly be in the Prep year, students aged six years may also be repeating the Prep year, or they may be repeating Year 1. As DETE only collects repeating data on students’ ages, not year levels, it cannot be precisely determined how many students repeat Prep. As the percentage of repeated students aged six years averaged 0.8 per cent between 2008 and 2012, and only some of these students were repeating Prep, it is still likely that the overall percentage of students repeated in the year prior to school has been reduced since the introduction of the Prep year. Further, as DETE has not made any recent policy changes regarding grade repetition, it is possible that the full-time Prep year has contributed, along with the various national policy changes and curriculum initiatives (ACECQA, 2012; AEDC, 2014; DEEWR, 2009; DEEWR, 2011) to better preparing children for school and reducing grade repetition. As research suggests (Hughes et al., 2010; Jimerson, 2004; McGrath, 2006), and as professional and educational bodies advise (NAECSSDE, 2000; NAEYC, 2009; NASP, 2011), high-quality pre-schooling is a more effective alternative to grade repetition in preparing children for school. Thus, the introduction of the full-time Prep year, along with the EYLF
in 2009 and the National Quality Standard in 2012, may have collectively contributed to raising the quality of Australian children’s early education (ACECQA, 2012), thus decreasing the need for them to repeat preschool.

While the introduction of the Prep year may have reduced the overall percentage of repeated students in Queensland state schools, it has not reduced the ratio of repeated boys to girls in Prep. For the years between 1997 and 2012, the percentage of repeated boys remained at approximately double the percentage of repeated girls. These findings are consistent with other studies which show that boys are more likely to be repeated than girls at the preschool level (Cannon & Lipscomb, 2011; Hong & Raudenbush, 2005). For each year from 1997 to 2012, boys aged five years were at greater risk of being repeated than girls aged five years (see Tables 3 to 5). The total risk ratio shows that for students aged five years, boys were at twice the risk of being repeated as girls.

However, a slightly different trend appears in Tables 6 to 8. These show the risk of boys being repeated declined after age five. Although at age five boys were at more than twice the risk of being repeated as girls, by age eight, boys and girls were at a similar risk of being repeated. One explanation for this may relate to the view held by some parents and teachers that preschool age boys are often ‘less ready’ for school than girls (Hong & Yu, 2006) because they do not display particular school-ready attributes, such as cooperation, obedience and diligence more often displayed by girls (Connolly, 2004). Thus, when the focus is on children to have particular behavioural or academic attributes, such children may be positioned as ‘unready’ for school (Ackerman & Barnett, 2005) and be repeated at preschool. Instead, the more recent emphasis on transition programs that provide culturally and contextually relevant experiences focusing on relationship building (DETE, 2014; Dockett & Perry, 2013) and children’s strengths, rather than on their need to have particular ‘school-ready’ attributes, better prepares children for school.

### Conclusion

In considering the findings of this research, the issue of ‘readiness’, which may lead to grade repetition, is problematic and needs to be addressed. Although broad definitions for readiness have been offered (Ackerman & Barnett, 2005), Dockett and Perry (2013) warn that such definitions more often ‘focus on children’s readiness’ rather than on schools or communities (p. 169). Further, readiness definitions more often incorporate a narrow focus on academic skills or behaviours. This is not only contrary to the holistic philosophy of early childhood education (DEEWR, 2009; Dockett & Perry, 2013; QSA, 2006) but may also result in a greater emphasis on a more academic curriculum in the early years of schooling (Dockett & Perry, 2013). It is, therefore, suggested that rather than focusing on ‘readiness’, which has the potential to position some children or groups of children as ‘unready’ and thus repeat preschool, a broader concept of ‘transition’, which focuses on children’s strengths and provides contextually and culturally relevant programs that build continuity of children’s experiences from birth through to early schooling, be utilised instead (DETE, 2013b; DETE, 2014; Dockett & Perry, 2013). Rather than just focusing on children commencing school through partnerships with all stakeholders including parents, early childhood educators and the community, transition programs can be developed over extended periods of time (DETE, 2014; Dockett & Perry, 2013). Thus, broader conceptualisations of readiness that recognise the diversity of children’s experiences and backgrounds, and that include all stakeholders in developing transition programs, may reduce the number of children positioned as unready for school and, thus, repeated at preschool.

Finally, in reviewing the findings of the study, the percentages of repeated students in early schooling were not high and have declined since the full-time Prep year was introduced in Queensland in 2007. Along with a range of national policy and curriculum changes (ACECQA, 2012; AEDC, 2014; DEEWR, 2009; DEEWR, 2011), this may have better assisted children’s successful transition to school. As well as these policy and curriculum changes, the recent transition policies in Queensland (DETE, 2013b; DETE, 2014) are less likely to require children to have particular ‘school-ready’ attributes, positioning some groups of children such as boys as ‘unready’ for school and repeated at preschool. Nevertheless, the most recent data from DETE shows that in 2012, 944 students aged five to eight years were repeated in Queensland state schools. This means that 944 students were offered a practice which—although still supported by some parents and early childhood educators—research over several decades has argued to be ineffective (Cannon & Lipscomb, 2011; Hong, & Raudenbush, 2005; Hong & Yu, 2006; Hughes et al., 2010; Jimerson, 2001, 2004; McGrath, 2006) and possibly harmful (Jimerson, 2001, 2004). Thus, when the focus is on children’s transition to school where ‘children’s strengths and needs’, and ‘opportunities and barriers to effective transitions’ are identified (DETE, 2014, p. 9), requiring children to have particular ‘school-ready’ attributes that may see them repeating preschool may diminish.

### References


Food allergy and food intolerance are on the rise in Australian communities. Increasing numbers of children are being diagnosed with food allergies and sensitivities. Children are especially prone to allergies and sensitivities as their digestive systems are not fully developed (Holland, 2004). The attendance of these children at early childhood settings requires the updating of policies and ongoing training of staff to ensure that these children receive adequate care. ‘Food allergy is now looming as a new epidemic with vast and significant implications’ (Prescott & Allen, 2011, p. 155), with visible, often immediate and possible life-threatening consequences. It deserves the serious recognition given by early childhood educators about food intolerance, its impact on families and how it may be managed in early childhood settings.

The participants in this study—parents of children with food intolerance—used self-reported journals and interviews to describe improvements in the health, behaviour and learning of their children when they ate food they were able to tolerate. They also believed that family relationships were better. They identified hardships in communicating food intolerance management with their extended families and with those responsible for the care and education of their children. An online discussion forum for people investigating food intolerance was also identified as a support.

Tolerance of food intolerance: A sociocultural study of parent perceptions on food, behaviour and learning in children aged between two and 14

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THIS QUALITATIVE STUDY FOCUSES on the beliefs of parents who have investigated food intolerance in their children, and their perspectives on the behaviour and learning of their children when on a diet of food they can tolerate. It aims to provide further information to early childhood educators about food intolerance, its impact on families and how it may be managed in early childhood settings.

The participants in this study—parents of children with food intolerance—used self-reported journals and interviews to describe improvements in the health, behaviour and learning of their children when they ate food they were able to tolerate. They also believed that family relationships were better. They identified hardships in communicating food intolerance management with their extended families and with those responsible for the care and education of their children. An online discussion forum for people investigating food intolerance was also identified as a support.
The double-blind placebo trials of Bateman et al. (2004) and McCann et al. (2007) both noted that the wide variation and individuality of symptoms, behaviours and food types made it difficult to adequately explain specific reactions to particular foods. Both studies found that symptoms of food intolerance seemed to be more readily recognised in preschool children (Bateman et al., 2004; McCann et al., 2007). Bateman et al. (2004) and McCann et al. (2007) focused on hyperactivity as being a possible symptom of food intolerance and included in their research the perceptions of parents. McCann et al. (2007) used three scales to measure parental reports of children’s hyperactivity. These checklists and scales gave parents an opportunity to share their observations and experiences with food intolerance. However, due to the specific criteria used, this was limited.

A study by Pelsser, Frankena, Bultelaar and Romelse (2010) on how food affects the sleep patterns of children with Attention Deficit Hyperactive Disorder (ADHD) used formal measures and a Physical Complaints Questionnaire (PCQ) with 36 items, each to be rated on a four-point scale. Additionally, parents wrote their observations in an extended journal, demonstrating a shift from earlier studies such as that undertaken by David (1987) which used scales only. Recognising the limitations of early studies in not allowing parents to share their experiences, Rowe (1988) developed the Rowe Behaviour Rating Inventory (RBRI) that included extreme ‘irritability’, ‘restlessness’ and ‘sleep disturbance’, and has been used by Dengate and Ruben (2002) and Rowe and Rowe (1994).

Breakey (1997) studied the research related to food and behaviour in children, finding that parents and educators note links between behaviour and diet differently. While parents may perceive that food affects behaviour, educators seldom suggest that behaviours may be linked to a food, or food substance, not well tolerated by the child. Educators tend to believe that behaviour is guided through discipline, behaviour management strategies and clear expectations. These differences in perceptions between parents and educators can create tension and misunderstanding. Parents feel frustrated at medical science for at times not recognising their concerns and not having an answer to the question of food intolerance within their child’s diet. They feel additionally frustrated when educators dismiss their concerns and beliefs.

Recognising the tensions, frustrations and feelings of parents, and noting their need to have their voices heard, this study has provided parents with an opportunity to share the reasons they chose to investigate food intolerance and their beliefs related to links between behaviour, learning and food.

Methodology

A sociocultural perspective distinguishes this study from previous research, with a focus specifically on parental beliefs about food intolerance and the relationship between diet, health, behaviour and learning. As part of this perspective, the beliefs of these parents as social participants in their communities are explored. Sociocultural theory provided a framework to allow for consideration of different layers of words and actions (Rogoff, 1995) with the intention of revealing the perspective of these parents from the Food Intolerance Network (FIN).

This framework considers the social and cultural context which surrounds each of the participants, as they share their perspectives on the relationship between food, behaviour and learning. It will provide a framework to consider the stories of the participants in a holistic way. The concept of culture within the sociocultural theory is described as ‘more than an individual construction’ (Fleer, 2002, p. 112), with interrelated concepts that can be explained separately, but are very much a part of the other.

Participants

Ethics approval from Monash University Human Research Ethics Committee was received. An outline of the study was advertised through FIN, asking for expressions of interest for participants for the study. FIN is an online community of people who have undertaken investigations into food intolerance issues and recognise their own need for support, in particular, by others with similar experiences. Four females between the ages of 30 and 50 expressed interest in the study and self-selected to participate. The participants lived in Melbourne and were parents who, at the time of the study, had children aged between two and 14 years (see Figure 1), identified as having food intolerances. The pseudonyms Abbey, Bernice, Camille and Donna have been used in this paper to identify the participants. Members of their families have also been given pseudonyms. Each participant agreed to complete a personal journal documenting issues they believed were related to food intolerance and to undertake a 45-minute interview with the researcher, who is one of the authors of this paper. The participants all started their food intolerance journey when their children were preschool age. They used the ‘Failsafe’ elimination diet recommended by Sue Dengate (2003, 2007) for salicylates, amines, glutamates and artificial additives. Bernice has also combined ‘Failsafe’ with foods low in fructose. Camille has combined ‘Failsafe’ with a low sugar diet and Donna tried many elimination diets and found the most benefit from a low oxalate diet. Bernice and Donna did the elimination diet with their children. Camille started to do it with one of her children, but found that she personally gained the most benefit.

Method

Participants were given a plain language statement to read and were verbally walked through the statement before signing, for informed consent (Cannold, 2001). The qualitative data collection tool chosen was an interview,
which was a structured conversation based on self-reflective journals aimed ‘to elicit the participants subjective point of view’ (Cannold, 2001, p. 179). As Cannold (2001) suggests, this style of interview generates rather than confirms theory. The participants were asked to complete a journal, which involved them recording their perceptions on the impact of food on learning and behaviour over a two-week period. A series of written prompts and provocations provided to the participants supported their journal writing. The participants were asked to write about their lived experiences related to food intolerance, how they heard about food intolerance, their reasons for investigating it, and their goals and beliefs about food, behaviour and learning. In the journals, participants outlined their beliefs and values about food, behaviour and learning; reasons for investigating food intolerance; their goals in undertaking a changed diet with their children; how they eliminated and challenged foods; and their beliefs and values about food, behaviour and learning were expressed.

The researcher used the participant reflective journals to shape the semi-structured interviews. Each participant chose a time and place for interviews which suited them. Two were in the homes of the participants, one in a cafe and another in a school office. The interview began with a general set of questions based on research about food intolerance. These general questions were followed by individualised questions raised from the individual participant’s journal for further discussion. This allowed for ‘conversations with a purpose’ (Burgess, 1984, p. 102), with participants given the opportunity to ‘direct and control the conversation’ (Grieshaber, 2004, p. 85). The questions began by allowing participants to clarify important points, highlight specific issues, answer questions and to ‘reshape questions that betray a researcher’s misunderstanding’ (Cannold, 2001, p. 180) or assumptions.

**Analysis**

The participants’ experiences were examined and key areas were coded by identifying similarities and differences between the participants’ responses. Initial themes established from the participants’ journals were used to develop an interview structure for all the participants, allowing for identified themes to be developed further in the interview. The interviews were analysed, with responses and themes coded. Rogoff’s (1995) planes of analysis was then used to organise the collected data, the participants’ experiences around food and behaviour, food and learning and parental values, under the headings of ‘personal’, ‘interpersonal’ and ‘community’ planes.

**Findings and discussion**

Health, behaviour and learning emerged as important themes for all the participants. The participants discussed how they believed food influenced sleep patterns, emotions and relationships. They also revealed how they saw the connection between food and learning, through their experiences with their child’s language development and concentration.

All the participants in this study had at least one child of preschool age when a food intolerance diet was first introduced to their families. At the time of the interviews, the participants’ children were aged from two to 14 years of age. Due to the small sample size, the study is not able to provide an in-depth view of the behaviours associated with specific food intolerance in preschool-aged children, as recognised in the literature reviewed (Bateman et al., 2004; Carter, Urbanowicz & Hemsley, 1993; McCann et al., 2007). It does however provide some indication as to the types of childhood behaviours observed by parents over a range of ages, when their children have food intolerance issues.
Personal plane

When asked a range of questions about their beliefs and values in regards to food, all participants gave positive examples of how their lives had improved after they had changed diets to manage food intolerances. Positive changes in physical health, relationships, behaviour and learning capacity were some of the experiences shared by the participants. They also described the contrast of the negative effect that eating food not tolerated could have on their lives. Donna described the disparity in her interview by saying, ‘it’s just night and day’, ‘completely different’. Bernice said that she is still stunned by what she calls the ‘stark contrast’ between life on- and off-diet. Abbey saw ‘Jekyll and Hyde’ in her son, depending on the foods he was eating.

Food and behaviour

All participants believed that a diet, which took into account individual food intolerances, had changed the difficult behaviour they noted in their children and in themselves, consistent with the findings in Bateman et al. (2004) and McCann et al. (2007). They attributed better sleep patterns to a diet of foods well tolerated, as well as a belief that they had become more empathetic as parents, which had improved relationships in the family.

Some participants described what they saw as significant differences in their children when they were eating food their bodies could tolerate, and it helped them to see ‘another side’ of their child. Abbey talked about seeing the ‘real child’ for the first time, describing her son as ‘easy to get on with’ when eating food he tolerated. Changing diet gave Bernice ‘the child and the life that I had always known was there’, and Donna said, ‘I know he’s an easy going happy little kid, sometimes he’s distracted because he’s not feeling well’.

While the participants in this study attributed dietary changes to the benefits they experienced, other factors may have contributed. Bernice had tried many approaches to behaviour management before attempting a food intolerance diet. It is possible that these strategies may have had an impact on her parenting and therefore the behaviour of her child. However, Bernice did not feel that the behaviour management strategies produced as much change as the change in diet had produced.

Donna talked about how she had more empathy and was more tolerant towards her child when he was reacting to food that he did not tolerate, suggesting that the food was the problem and not the behaviour. It is possible that a parent’s tolerance levels could have played a role in the more amenable family relationships experienced by these participants. It is not possible to distinguish whether it was the children’s behaviour or the parents’ tolerance levels that made the most significant difference in these families. However, both changes are attributed by the participants to the changes they made in their family’s diet.

Friendships

Both Abbey and Bernice shared how their children found peer relationships difficult before they discovered their food intolerance. Bernice stated that it was difficult for children to relate to Bess’ behaviour, and it was ‘very upsetting’ to see her only child without friends. In contrast, Bernice said ‘now she’s got loads and loads of friends who all seem to want to be around her’. Bernice, as an adult, also found that she felt more ‘friendly’ while eating food she tolerated. These parents attributed the discovery of food intolerance as a factor in developing relationship skills. As children start to make reciprocal friendships at around the age of three or four (Kay, 2007), these findings are significant for early childhood educators.

Anxiety

The participants in this study mentioned that either they personally experienced increased issues of anxiety or they observed greater anxiety in their children, when not eating tolerated food. They also noticed these anxiety levels diminished when eating food well tolerated. Bernice and Camille recognised their own heightened anxiety when they ate off-diet. Camille said that when eating off-diet she would get ‘a bit teary and feel as though I am losing control, not as much patience’ and did not speak to the children as calmly as she would have liked. Bernice felt more ‘calm’ and ‘relaxed’ when able to prepare well-tolerated food on their family holiday.

It was interesting to note that some participants reported that their children could see changes in themselves when they ate foods well tolerated. Abbey talked about how both her children could see the differences that food made to them, saying that one of her sons ‘is glad that he doesn’t have those anxiety attacks anymore’. Bernice said that her daughter felt ‘better’ on the diet.

Over-reactions

All four of the participants reflected on times that had become unnecessarily emotional over seemingly small issues. Bernice describes her family’s pre-diet life as ‘high tension all the time’. She described how her husband (Brian) and her daughter (Bess), screamed at each other ‘over something stupid’ when they had eaten off-diet. Abbey talked about times when ‘small things were being silly’. Donna recollects times when Dale had eaten off-diet and he would have a ‘meltdown disproportional to what has happened’. Camille said that when off-diet she would, ‘yell at the children more than I’d like to’.

Sleep issues

Three of the participants recognised sleep issues associated with food intolerance, also identified in recent research by Pelsser et al. (2010). Bernice finds that she can sleep better when on-diet. Camille said:

[Cris, under two years of age] every other night would literally scream between six o’clock and nine o’clock at night. So I started on the internet reading things and
I came across some of the food intolerance things … and started to read some more about it.

… while I wasn’t sure if it fitted her it seemed to fit me. So I thought OK let’s try it. It did seem to make quite a difference. She sort of seemed to grow out of it, I’m sure she’s still sensitive to something but it’s nowhere near at the level that I am at.

It was Donna’s frustration with Dale’s poor sleep patterns as a baby that initially prompted her to investigate food intolerance. Donna understands Dale’s food intolerance through his sleep patterns and says, ‘his sleep is a big indicator’. In reflecting on her experience with the low oxalate diet for six months, Donna says, ‘there’s no waking up in the middle of the night and screaming for half an hour and yes things had improved’.

Both Camille and Donna saw tiredness as a symptom of food intolerance. Donna said, ‘he’s tired because he hasn’t had as much sleep’. She believes that the interrupted sleep Dale experiences when reacting to food causes him to become grumpier and she said, ‘if you’re feeling grumpy you’re less likely to be adventurous’. Abbey also described her son Alan as being grumpy when off-diet and Camille described herself as ‘cranky’. Pelsser et al. (2010) also found a decrease in these behaviours when sleep improved.

**Food and learning**

**Language**

Both Abbey and Donna talked about the increased use of oral language by their children when on-diet. Donna recounted how Dale is ‘chatterier’ when on-diet. Abbey tells that she nearly drove off the road when Alan, aged three years at the time, spoke his first-ever sentence. When Alan had been sick and did not eat any offending foods for three days, Abbey describes the many changes that she saw in Alan and marvelled at how he ‘used more words’. Abbey reflected how Alan (at age three) was always taught to use his manners, however it was not until he was on-diet that ‘please’ and ‘thank-you’ were ‘popping out everywhere’. She said, ‘Then he got better and I started to feed him and the deterioration was almost instantaneous, it was like giving him drugs. It was a really amazing thing’. Abbey saw Alan’s ‘learning ability change’ and said that she decided to stay on-diet so he could ‘continue learning properly’.

**Concentration**

Part of ADHD is the inability to attend to a task. Bellisle (2004) suggests that considering that there has been an increased prevalence of behaviour disorders and an increased use of food additives, often in processed foods, that ‘the potential contribution of dietary substances to the problem deserves vigilant consideration’ (S228). This opinion was also shared by McCann et al. (2007) and Bateman et al. (2004).

Although the children were not diagnosed with ADHD, the participants noted similar behaviours in their children when they were off-diet. The two participants whose children were still preschool age at the time of the study, talked about how they observed better concentration for themselves and their children when on-diet. Camille noticed the deterioration in her own concentration when she was off-diet and how ‘it’s just so much easier to concentrate and to achieve things when your body is actually there in one piece’. Donna talked about how Dale could pay attention and stick at something for longer when he was on-diet. She says, ‘He’ll play independently, he’ll get really engrossed in something, he’ll stay at it, he’ll try new things, like he might be building something and he’ll build something new’.

**Interpersonal plane**

At the outset of the interview with Bernice, when asked about the issues associated with food intolerance, she reported, ‘socialising can be difficult, particularly with people that don’t have food issues. Everything revolves around food’. She found it easier to socialise with people who had food issues or sensitivities to foods and referred to an upcoming party where she would be inviting people from her online discussion group. This participant said, ‘I actually prefer to do social events with these two and their families because I don’t have to worry about all the guff that usually happens’.

On several occasions Donna talked about how other parents, who she believed had limited understanding of food intolerance ‘might disagree’ with her approach. Her child has intolerances to particular vegetables and follows a low oxalate diet. She said:

*I’m not giving him certain vegetables. Other people would argue those are very healthy vegetables and would say I’m depriving my child of healthy vegetables. I’m sure other people look at what I give him on his birthday, what his special treats are and say, ‘you are depriving this child. It’s his birthday’.*

When asked to talk about her experiences in explaining these diets to people, Donna said, ‘oh, I don’t do it very often’. This is a significant part of her life yet she chooses not to talk about it with many people as she has found most people are not interested and they judge her and her parenting negatively.

Pelsser and colleagues (2010, p. 1136) describe dietary change as ‘socially handicapping’ and this was expressed by the participants in this study. Participants in this study were drawn to socialise with those who also had experience with food intolerance. Those who have a food intolerance themselves are often more sympathetic of others with food intolerances, even if they have different sensitivities. They are more aware of the needs of those with food intolerance issues because of their personal experiences and are less likely to be sceptical as someone with no experience might be.
**Community plane**

**World Wide Web**

While communication with those who do not understand food intolerance is uncomfortable for these participants, communicating using the internet has been an integral part in their food intolerance journey. All of the participants have used the internet to get information and they all speak favourably of their experiences with the online support networks. Bernice states, ‘I couldn’t have done it without that resource [FIN]’ and how it provided her with two of her closest friends. Camille also first came to learn about food intolerance on the internet.

Having a forum to share experiences, questions, mistakes and successes has provided these participants with friendship, knowledge and support. It has given them opportunities to share what they have learned. Bernice noted however that, ‘there is so much untested on the internet’ and described the difficulty in sifting through different opinions. Undeterred, she summed it up by saying, ‘It’s worth the price I guess’. It seems to be easier for the participants to deal with the differences in opinions when it comes to discussion forums on the internet, as they continue to use this resource despite the challenges.

**Health system**

In this study, each participant shared a dynamic and individual journey with food intolerance, reporting varying outcomes as they explored complementary, alternative and conventional medical practices. Donna recalls how difficult it was to find someone in the healthcare system to believe her about her son’s food intolerances. She further stated how ‘instrumental’ it was that her lactation consultant took her seriously.

Some conventional medical practices argue that there is no scientific evidence to support claims of food intolerance. Further, Kopelman (2002) points out that some conventional treatments have not been scientifically and rigorously tested. The experiences of families who have investigated the reactions of specific foods on their child’s wellbeing, learning and behaviour, may not be scientific in nature; however, O’Connor (2002) suggests that these personal lived experiences carry significant evidence of healing and that hearing, learning from and acting on these experiences may be valuable.

**Education system**

The families in this study often felt that those caring for their children in early childhood settings did not understand the issues around food intolerance, nor did they respect or understand the family’s beliefs or values. Difficulties in communicating their child’s food intolerance with educators in early childhood and education settings are described by the participants. A story to illustrate this difficulty was told by Donna:

I say ‘No tomatoes’. They say, ‘What happens if he has tomatoes, is it like an allergic reaction?’ I say, ‘It’s more like food intolerance’, and the eyes start to glaze over ... and they are like looking around the room. And you’re like right, OK, interest level zero. Then one day when the normal chef was on holidays they made spaghetti bolognaise. And I was asking, ‘Oh what did he have?’ ‘Yeah he had spaghetti bolognaise.’ ‘Oh well what kind of sauce did he have on it, did he just have meat?’ ‘No, tomato sauce.’ I’m like, ‘Isn’t tomatoes on his no list?’ And they’re like, ‘Oh do you mean like canned tomatoes. We thought you just meant not fresh tomatoes.’ ‘A tomato is a tomato.’

She explains that:

He has a lot of food at childcare that he wouldn’t have at home, and that’s partly because I can’t think of alternatives for them and partly because I don’t want the look of ‘you’re an absolutely crazy parent’.

Bernice mentioned the difficulties she had communicating with educators about her daughter’s food intolerance which included chocolate. She relayed a story of her daughter’s educators who planned a chocolate day every Thursday. ‘They’d have hot chocolates or bars of chocolate or whatever; it adds difficulty to things you know.’ So that her child was not further excluded, she would make chocolate cupcakes or find a type of chocolate for her daughter to take which she could tolerate with her sensitivities. Holland (2004) describes the importance of considering food intolerance and allergy when planning food-related events and offers some useful strategies.

**Implications for educators**

It is interesting to note that, although at the time of this study the children were of a variety of ages, the children were all pre-schoolers at the start of their food intolerance journey. The participants recollected and talked of many aspects of their child’s education and care, including early childhood. Participants in this study talked of their desire to be heard by the educators of their children. All too often they felt that their concerns were dismissed. They cited instances of when their children’s diet, to manage their intolerances, was questioned or ignored. This resulted in the parents feeling that they could no longer trust their child’s educator or carers. Two principles of Belonging, Being & Becoming: The Early Years Learning Framework for Australia (EYLF) describe the need for ‘Partnerships with families’ and ‘Respect for diversity’ (DEEWR, 2009, p. 10). This would require both parents and educators to trust, respect, share and embrace diversity. Listening to, and acting on parents’ beliefs about their child’s food intolerance shows respect, builds trust and embraces the individual diversity the child and family bring to the service. It is on these foundations that partnerships are built and developed, enhancing the learning experiences of children, families and educators.
Learning experiences are shaped by the National Quality Standard and the EYLF, where Outcome 2 outlines ways that ‘children are connected with and contribute to their world’, and one way is for ‘children to respond to diversity with respect’ (DEEWR, 2009, p. 27). These experiences can be achieved through educators engaging in conversations with children which value diversity and individuality (DEEWR, 2009). Holland (2004) provides practical resources and suggests the use of picture books in early childhood settings to stimulate discussions about food intolerance and allergies. Demonstrating respect for each other is important as children also learn by the actions of parents and educators.

In simple terms, the participants in this study wanted to be heard and taken seriously. They wanted their experience to be acknowledged and supported through actions to make necessary dietary changes. Respect for people with food intolerance can be shown through accepting and taking an interest in their journey and making an effort to accommodate their needs. Through appreciating the difficulties experienced by these families, it is possible for early childhood educators and families to work together to create partnerships and more inclusive social experiences which are less isolating.

The reality for many early childhood educators is the challenge of maintaining relationships and partnerships with a large number of families and it is an increasing challenge to learn specific information about the individual children in their care and the needs of the families. In the issue of food intolerance, as with food allergies, the information needs to be conveyed to others with accuracy and specific detail. Formal communication processes may be necessary to ensure understanding of food requirements for those with food intolerance. Documentation and communication of food allergies with children in early childhood settings is governed by clearly defined processes. These could also be adopted for those with food intolerances, so that the needs of these children are clearly understood by all.

**Conclusion**

Using a sociocultural perspective has detailed the three planes (Rogoff, 1995), including the personal plane, where the participants perceived many positive changes for themselves and their families once they adopted a diet in accordance with their child’s food intolerance. These changes included their children’s health, behaviour, learning and general wellbeing, in areas that have also been highlighted in research (Bateman et al., 2004; Pelsser et al., 2010). However, within the interpersonal and community planes (Rogoff, 1995), the participants experienced difficulties when they needed to explain their family’s food intolerance and dietary requirements to others, including in early childhood settings.

These findings suggest that a sociocultural approach is needed to effectively manage food intolerance issues with families. All parents need support in their parenting journey (Ehrensaft, 1997), including those managing food intolerance issues. The children and their families need educators and carers who recognise their individual needs and to accommodate them in an inclusive environment. Awareness and acceptance of food intolerance issues is needed to create more tolerant communities for those with food intolerance and allergies.

With instances of food sensitivities and allergies rising (Prescott & Allen, 2011), our beliefs, values and assumptions about food intolerance need to change. The challenge is to develop a culture that has ‘capacity for constantly expanding the range and accuracy of one’s perceptions of meanings’ (Dewey, 1966, p. 123). There may be times when we need to embrace the many different ways that we can provide for the needs of children. Imagine if we began to see difference as an opportunity to understand others, ‘without making them the same’ (Dahlberg, Moss & Pence, 1999, p. 57). Being inclusive and embracing difference allows for modelling of how, as a society, we can accept individual children and show a way forward to change the fabric of our culture to one in which diversity and difference is supported.

**Acknowledgements**

Our thanks to Associate Professor Suzy Edwards, Australian Catholic University, for reviewing an early draft of this work.

**References**


What do early childhood teacher graduands say about working with infants and toddlers?:
An exploratory investigation of perceptions

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**RECENT INITIATIVES IN THE** early childhood education and care sector have increased the demand for early childhood teachers to work in long day care settings. This study explores the perceptions of pre-service teachers who had recently finished their final semester of study and were due to graduate from one Australian higher education institution in the state of Queensland. A cohort of pre-service teachers was invited to complete an online survey investigating their perceptions of working with infants and toddlers. A response rate of 80 per cent, representing 25 respondents, participated in the study. Descriptive statistics and content analysis were employed to analyse the survey data. The findings reveal that overall, pre-service teachers reported they had a partial knowledge of children aged birth to three years after completion of their teacher education program. This was despite 10 days of placement with infants and toddlers, and knowledge and content about infants and toddlers being embedded throughout the teacher education program (birth to eight years). Findings are also relevant to industry and government policy-makers who are advocating for qualified early childhood teachers to work in prior to formal school settings within Australia.

**Introduction**

Early childhood teacher education within Australia is a complex arena. A variety of teacher education programs have been approved by the Australian Children’s Education and Care Quality Authority (ACECQA). Some approved programs focus on children aged birth to five years, and others on birth to eight years. Variation may also occur in course structure and professional experience. For example, some universities may embed knowledge on infants and toddlers across their subjects, while others may have subjects specifically focused on infants and toddlers. Variation can also occur regarding the number of professional experience days, with some programs offering those mandated by ACECQA, and others many more. Such variation is likely to result in differences in the capacities of graduates across the country. Research is thus needed into outcomes for graduates from these programs, including their own perceptions of their competence.

This study takes the stance that a theoretically rich understanding of teaching and learning is important for ensuring quality in early childhood education (ECE). This understanding grows when students study early childhood teaching and learning. In ECE this includes a focus on children from birth to five years.

Recent research on early childhood teacher education programs within Australia suggest some universities may focus less on infants and toddlers and more on children aged three and above (Garvis, Lemon, Pendergast & Yim, 2013). There is a need within Australian early childhood teacher education research to explore this finding and examine the perceptions of graduates about working with the youngest of children.

This study reports on the findings of a survey administered to 25 pre-service teachers at one institution in Queensland, Australia who were at the end of their undergraduate program of study and about to graduate and enter the teaching profession. The pre-service teachers were enrolled in a Bachelor of Primary Education (early childhood specialisation birth to eight years) that would allow them to be employed in either prior to formal school settings (such as long day care) or in a preschool.

The online survey was designed to capture the graduating teachers’ perceptions about working with infants and toddlers. Learning about infants and toddlers had been embedded in their teacher education program. The graduating teachers had also undertaken a 10-day placement working with children aged birth to two years during their teacher education program. They had also undertaken professional experience in kindergarten and a primary school.
Literature review

In Australian early childhood education and care, the National Quality Framework for Early Childhood Education and Care (COAG, 2009) has been developed to raise quality and drive continuous improvement across all early childhood education and care services. The framework mandates that all childcare programs are to employ a four-year degree qualified early childhood teacher. In Queensland the guidelines require (Queensland Government Office for Early Childhood Education and Care, 2013):

From 1 January 2014, all centre-based services with children under school age (primarily long day care and kindergarten services) will need to have access to a qualified early childhood teacher or have one in attendance at the service (p. 3).

Growing evidence from a range of research studies reveals that when early childhood educators hold higher levels of qualifications, there is a better chance of quality programs for children (Sylva, Melhuish, Sammons, Siraj-Blatchford & Taggart, 2011). The evidence suggests that early childhood teachers with higher-level qualifications are more likely to engage in appropriate interactions that are sensitive, responsive and engaged (Norris, 2010). Higher qualified early childhood teachers have also been linked to greater staff-initiated learning, and to staff being more engaged in play and social interactions with children (Dowling & O’Malley, 2009; Mitchell, 2010), particularly for infants and toddlers (Hannon, 2003; Ireland, 2006). Thus, there is an expectation underpinning the framework that highly qualified early childhood teachers will make a positive difference to service quality, providing better outcomes for children (Nolan & Rouse, 2013).

In Australia, the age range birth to three years has received scant attention in many early childhood teacher education programs (Garvis et al., 2013). Garvis and colleagues (2013) found that many programs appeared to spend more time on older children, with few assessment items dedicated specifically to infants and toddlers. Garvis et al. (2013, p. 14) argued:

If there is to be an improvement in the quality of early childhood education and care, it is important that pre-service teachers are provided with adequate knowledge and experience to understand the importance of infants and toddlers.

Findings are similar in the United States. Although most early childhood teacher education programs claim to have a broad reach across the range of children from birth to eight years, typically there is only a light touch in the earliest years (Recchia & Shin, 2010). Recchia and Shin (2010) also suggest this may be because there is a perception in the United States that the educational preparation required of infant and toddler ‘caregivers’ is less rigorous than that required of ‘teachers’ of older children.

There is also some evidence in Australia that pre-service early childhood teachers want to work with older children as opposed to younger children within early childhood settings (Nolan & Rouse, 2013). This preference may reflect the low professional status of teachers working in child care, along with salary and other industrial conditions, when compared with school employment. The professional status of teachers in childcare settings is not comparable to that of teachers in school settings, with a widespread perception that teachers in child care are not ‘real’ teachers (Ali, 2009; Sumison, 2007), and they do not share the same professional status as teachers in other education settings (de Leon-Carillo, 2007).

In another Australian study, Thorpe, Ailwood, Brownlee and Boyd (2011) explored the beliefs of pre-service teachers in their third year of study of a Bachelor of Education (early childhood specialisation). The study found that while pay, conditions and status of early childhood teachers act as barriers to working in the childcare sector, over half the students said they would consider working in this sector. Students who had a positive practical experience were found to be more likely to consider entering the childcare workforce. The different findings from the Australian literature suggest possible differences in pre-service teacher perceptions between primary programs with early childhood specialisations and early childhood programs. The study will explore this further by focusing on a primary program that has an early childhood specialisation.

Context

At the university where the present study took place, an early childhood specialisation (birth to eight years) was embedded in the Bachelor of Education (Primary). The pre-service teachers involved in this study were in the final year of a four-year Bachelor of Education (Primary) program in Queensland. It was designed to prepare pre-service teachers to work in prior to formal school settings as well as in primary school (up to eight years of age). The program was also approved by the Queensland College of Teachers (QCT) which is the registering authority to whom graduating teachers apply for provisional registration. The program was revised in early 2011 to meet the requirements for early childhood placements. This revision included the introduction of an infant and toddler placement.

Within the program, students were expected to undertake 80 days of professional experience as part of the early childhood specialisation. This consisted of 10 days of placement with infants and toddlers, 40 days with children aged two to five years and the remaining 30 days with children aged five to eight years.

Method

This study is located in the interpretivist paradigm (Cohen, Manion & Morrison, 2000). An interpretivist approach can facilitate insights into emotions, meaning and reasons
for actions. As Schwandt (1994, p. 118) suggests, ‘to understand the world of meaning, one must interpret it’. An interpretive approach was used for this study to explore the perceptions of graduating pre-service teachers about working with infants and toddlers.

A mixed design survey was employed that included quantitative and qualitative questions. An online survey was chosen as it allowed participants to complete the survey at a time convenient to them and away from the university campus.

Ethical approval was gained from the University Human Ethics Committee. Participants were not taught by the research team, limiting coercion and power dimensions. Once ethical approval was obtained, the pre-service teachers were sent an email advertising the research project. A convenience sample was chosen because of ease of access. The email included a link to the online survey questions hosted by SurveyMonkey. Pre-service teachers could choose to voluntarily participate by clicking the link, or could choose not to participate by deleting the invitational email. Two reminder emails were sent to all students approximately one week after the initial invitation email was sent. Pre-service teachers were then given an additional three weeks to complete the survey. The survey was anonymous and participants did not provide their contact details or other identifiers.

The timing of the online survey was crucial to elicit a high response rate. Previous online surveys in Australia with pre-service generalist teachers had low response rates of 14 per cent (O’Neill & Stephenson, 2012). Sax, Gilmarin and Bryant (2003) suggest low response rates with university students as respondents could be due to being bombarded by questionnaires, a lack of time to participate in voluntary activities and a perceived lack of relevance. The survey in this study was sent after all university surveys and assessment work had finished for the semester. The survey achieved a response rate of 80 per cent, with 25 out of 31 students all providing complete responses. Participants were all female and aged between 22 and 36 years.

The participants had completed 10 days of professional experience with infants and toddlers. The design of the Bachelor program did not have a specific subject focused on infants and toddlers. Rather, learning about infants and toddlers was embedded across all of the subjects.

An online survey was created based on a combination of closed and open questions and consisted of five main questions. The survey focused on perceptions of working with this age range and also current knowledge of working with infants and toddlers. The pre-service teachers were asked to rate their current level of knowledge and understanding about children birth to three years. An example of a research question was:

1. How would you rate your current knowledge and understanding of children birth to three years?

Pre-service teachers were also asked to comment on their emotional state if they were offered a position working with children birth to three years. Participants were given a range of emotions to choose from and could also add their own (see Table 1). Emotional response scales have been used in studies relating to experience and response to stimuli (Fink, 2003). The emotional response for this question was related to the stimuli about working with infants and toddlers. The intention was to find emotional experiences that influence competence and confidence for teachers.

The survey was piloted with a third year cohort of pre-service teachers for readability and in order to establish the duration of time required to complete the survey. The third year pre-service teachers were asked to read the survey and comment on any wording they did not understand. They were also asked to record the time it took to complete the survey.

The quantitative sections of the survey used with graduands were analysed using basic descriptive statistics (mean and frequency counts) to determine the most common responses. Since the cohort was small, it was impossible to move beyond descriptive statistics. Extended response questions (qualitative data) were analysed using content analysis, ‘a research technique for making replicable and valid inferences from texts [or other meaningful matter] to the context of their use’ (Krippendorff, 2004, p. 18). Coding for manifest content (Wallen & Fraenkel, 2001) was used as the basis of the analysis, meaning that the written words were interpreted literally.

It is important to point out the limitations of this study. Although the study achieved a high response rate, the population under investigation was small. In addition, just one cohort of students in one program specialisation at one university was invited to participate. So, although the findings provided some direction, they cannot be generalised to all Australian pre-service early childhood student teachers.

Another limitation relates to the trustworthiness of the self-reported data. Participants may have had inaccurate recall (Stough, 2006), under- or over-estimating their capabilities. Like all self-report studies, the perceptions were those as reported, and may not reflect the reality of the situation being investigated.

Findings are presented within three themes.

Findings

1. Current perceived knowledge and understanding about children aged birth to three years

The pre-service teachers were asked to rank their current knowledge and understanding of children birth to three years on a five-point Likert scale. The rankings were: nil knowledge, minimal knowledge, partial knowledge, basic
The majority of participants (n = 18) responded that they had partial knowledge and understanding of children birth to three years. This was followed by minimal knowledge (n = 3), basic overall knowledge (n = 2) and comprehensive knowledge (n = 2). Only two participants indicated they had comprehensive knowledge of this age range, even though all students had specialised in an approved ECE program. This finding is of interest, considering the pre-service teachers had undertaken practicum experience of 10 days with children aged birth to two years, and had gained pass grades in courses with infant and toddler content. This finding suggests that the current level of time and content given to learning about infants and toddlers within the program may be inappropriate or insufficient.

The participants were also asked to comment on the key ideas concerning child development that were needed for infants and toddlers. This question was intended to show insight into what the pre-service teachers could remember from their early childhood programs regarding this age group.

The most popular response was attachment theory (n = 16), suggesting this was the most important idea related to the developmental needs of children birth to three years for participants. Other areas mentioned by the participants included developmental theories (n = 4), the importance of quality of care (n = 3), brain development (n = 1) and viewing infants as capable (n = 1).

2. Extent to which course/program has informed graduate knowledge about children aged birth to three years

The majority (n = 18) of the pre-service teachers stated that the early childhood specialisation in the program focused more on kindergarten and preparatory education than children aged birth to three years. Typical comments included:

- We mainly focused on kindergarten and primary education (Participant 1).
- We probably spent more time on 3 year olds to 8 year olds (Participant 25).

The pre-service teachers also stated that when they were in generalist education subjects, there was little acknowledgement of ECE and the role of early childhood teachers before the formal years of schooling. To some participants this provided a tension between learning about ECE and primary education:

- We learnt a lot about the key developmental theories however they seemed to be parallel to primary education courses. There were different ideas on teaching, management and assessment (Participant 6).
- It would have been nice to see prior to formal schooling in all the subjects that we studied. I think all students in primary education need to know where children come from. I was always explaining things to people (Participant 21).

Although the pre-service teachers suggested a greater focus was placed on children aged over three years, they also identified differences in approaches, teaching and amount of time focused on different age ranges within their generalist subjects that included early childhood and primary specialists within the program. The focus of generalist subjects would be to provide a holistic understanding of children aged birth to 12 years. The comments from the participants suggested this may not have been the case.
3. Accepting employment opportunities to work with children aged birth to three years

Participants were asked a yes/no question about accepting a position of employment with children birth to three years. Only one participant answered ‘yes’ to accepting such a position. The remaining 24 participants indicated they would not accept a position if they were offered employment with this age range.

Just over half the participants (n = 12) would consider working with this age range if the pay was the same as a qualified teacher in a primary school. This is surprising considering the participants had also identified gaps in their own knowledge about infants and toddlers. Respondent comments included:

After four years of study I need to take a job that has adequate pay for my family and to help repay my study debts. Unfortunately the pay in birth to three years does not provide enough for an individual to live, let alone a family (Participant 3).

A small group of participants (n = 5) did not want to work with this age range as they already had a job for the following year in a primary school, or they had an identity that was more closely associated with a kindergarten and preparatory teacher. This small group of participants saw limited professional status for teachers working with children aged birth to three years. The participants also stated that if you work with children from birth to three years you are not considered a teacher. As one participant explained:

I want to work with kindergarten children, not this age range. I would also waste my training as a teacher. There are no teachers in this age range so I’m not quite sure what I would do with all of my educational training. They aren’t considered teachers. Policy says they are teachers but the community says no (Participant 7).

A small group of pre-service teachers (n = 8) also stated they felt uncomfortable working with young children. In their opinion, working with young children required higher levels of responsibility than needed for older ones, and stated they did not know how to communicate with pre-verbal children. One participant, for example, commented as follows:

I don’t feel comfortable working with such young children and I wouldn’t like the responsibility of such young children. I also don’t know how I would handle the children not being able to speak (Participant 14).

Other fears of working with young children appeared to be the tasks associated with regular nappy changes and basic routines related to handling babies. The pre-service teachers were worried they did not have the practical skills necessary for very young children’s care routines. Again, this was in spite of the pre-service teachers having undertaken a 10-day placement with very young children.

Participants were also invited to tick the words they would use to describe the emotions they would feel if they were offered a position for children birth to three years. More than one response could be chosen. Participants were also given an option to list their own terms in the ‘other’ box but no respondents completed this box. The top four feelings were unwilling, unhappy, not confident/worried and reluctant. Only a small number of participants expressed positive feelings (two participants) about working with this age range.

Table 1. Feelings of perceived employment with children birth to three years

<table>
<thead>
<tr>
<th>Emotion</th>
<th>Percentage (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unwilling</td>
<td>64% (16)</td>
</tr>
<tr>
<td>Unhappy</td>
<td>20% (5)</td>
</tr>
<tr>
<td>Not confident/worried</td>
<td>20% (5)</td>
</tr>
<tr>
<td>Reluctant</td>
<td>16% (4)</td>
</tr>
<tr>
<td>Reserved</td>
<td>8% (2)</td>
</tr>
<tr>
<td>Confident</td>
<td>8% (2)</td>
</tr>
<tr>
<td>Excited</td>
<td>4% (1)</td>
</tr>
<tr>
<td>Concerned</td>
<td>4% (1)</td>
</tr>
<tr>
<td>Happy</td>
<td>4% (1)</td>
</tr>
<tr>
<td>Willing</td>
<td>4% (1)</td>
</tr>
<tr>
<td>Other</td>
<td>0% (0)</td>
</tr>
<tr>
<td>Tentative</td>
<td>0% (0)</td>
</tr>
</tbody>
</table>

Participants were also provided with the opportunity to explain their feelings. The comments below relate to feelings of being unwilling and are also related to the significantly reduced salary conditions:

If they paid me the same as a primary teacher I would do it. You aren’t even paid three quarters. I think that providing better salaries would also improve the overall quality in the profession and for children’s outcomes (Participant 2).

Until the pay and conditions are fixed I will not consider it. I feel sorry for working parents as they often do not have a choice with childcare. We need qualified staff to raise the quality in this age range but we aren’t prepared to pay for it. It isn’t good enough. We are a wealthy nation but we can’t even pay educators properly to look after the most important members of society. They [these educators] are teachers also (Participant 15).

A small group of pre-service teachers (n = 8) also revealed a fear of working with this age range. They stated that they did not have enough practical experience with this age range even after they had completed 10 days of placement with infants and toddlers. The pre-service teachers also commented that they did not have their own children to learn care routines. Their comments often included a statement that they did not have children. For example:
I don’t really have a lot of prior experience to draw upon. I think this age range would really benefit from mothers who have had a lot of experience with care routines. I know what they are about only from a theoretical perspective and a really short practicum of ten days (Participant 3).

The findings from the survey highlight that even though the participants had undertaken 10 days of professional experience, they did not feel adequately prepared to work with infants and toddlers. Although the teacher education program had embedded learning about infants and toddlers across subjects, it appeared not to have been effective for student learning.

Discussion

The findings from this study raise questions about the adequacy of initial teacher education for employment in settings for children birth to three years. Even though pre-service teachers were qualified in birth to eight years, the majority stated they had only partial knowledge of this younger age range, thus providing another barrier to work with infants and toddlers. Even after a 10-day practicum placement, some pre-service teachers were not confident about care routines and were worried about the responsibility of very young children. This raises questions about the length of the professional practice experience (for instance, is 10 days enough considering other professional experience placements with older children are longer?) and the content within the practicum (what learning actually occurs for the pre-service teachers?). Questions are also raised about program content regarding children within early childhood specialisations. Indeed it may be that within the Bachelor of Primary Education, there was a greater focus on children aged three years and up, at the expense of expertise with children from birth to three years. A discussion may be needed within the early childhood teacher education community about placements with infants and toddlers and program content, as well as the appropriateness of Bachelor of Primary Education degrees with early childhood specialisations. The findings also raise the question of what defines a quality placement. Thorpe et al. (2011) found that a positive placement can lead to positive beliefs about working in the childcare sector.

The questions raised about program content and the length of the birth to three years practicum within early childhood teacher education programs is consistent with the recent Australian study by Garvis and colleagues (2013). They found limited time and assessment tasks focusing on children aged birth to three years. In this study, it would appear that the pre-service teachers in the primary program with an early childhood specialisation did not perceive they had suitable knowledge for this age range. It would be interesting to explore if similar findings exist in other early childhood specialisations that do and do not have a primary school component. It may be that primary education programs generalise ECE to the extent where graduates have no intention of working with young children.

Perhaps consideration needs to be given to specific subjects that focus on infants and toddlers to provide detailed and direct learning about this age range. Within the program in focus, the approach of embedding learning about infants and toddlers across subjects did not appear to be effective in enhancing student knowledge, competence and confidence when working with this age range. According to Garvis et al. (2013), the approach of embedding knowledge about infants and toddlers across subjects, rather than having an individual subject focused on infants and toddlers, appears common across early childhood bachelor degrees. It is important that universities monitor student learning to support confidence when working with infants and toddlers. It may be useful for ACECQA to revise current requirements for infants and toddlers in their teacher education guidelines. It might also be useful to recommend that universities have teaching academics who have experience working with infants and toddlers.

It would be interesting to know where effective infant and toddler teacher education is occurring within Australia that allows graduates to feel confident and competent. Given the variation in approaches across the states and territories in Australia in regard to the delivery of content relevant to infants and toddlers and the time devoted to placements with them (beyond the minimum requirements of 10 days), examples of success would be useful. This would be particularly helpful for early childhood teacher education programs or specialisations that prepare graduands for work with children aged birth to eight years.

Findings from this study however, reveal there are perceived hurdles to early childhood teachers wanting to work with very young children, one being pay and conditions when compared to a teacher working in a school. If we accept the underpinning assumptions about quality enhancement through this mechanism—unless these hurdles are addressed and given adequate attention by employers and policy-makers—the planned improved quality in the early childhood sector cannot be realised. Policy-makers must be aware that while policy is mandated, pay also acts as a potential enabler or barrier for professional work. Without comparable conditions of wages for graduates from the same four-year teacher education program, the early childhood sector will not be able to attract the best in the field. These findings align with recent research by Nolan and Rouse (2013) who reported that some of their early childhood teachers preferred to work with older rather than younger children because of perceived better working conditions and levels of respect.

The pre-service teachers in the present study spoke about the status of early childhood teachers in long day care settings being lower than that of primary school teachers. Similar findings have already been highlighted in the Australian literature (Ali, 2009; Ireland, 2006; Sumsion,
In this study, the pre-service teachers suggested that while the terms ‘teacher’ and ‘educator’ were used in teacher education and early childhood placements, the current community did not share the same terminology. Sumption (2007) describes teachers working in long day child care as not being perceived to be ‘real’ teachers. It is the role of the early childhood sector as well as government policy-makers to help transform community perceptions of educators and teachers working in the early childhood sector. As Ledoux, Yoder, Hanes and McHenry (2008) note, the early childhood field itself seems unclear about the teacher’s role in infant and toddler programs. What is needed is an alignment about the understanding of the role of the teacher with very young children, followed by education of the wider community regarding that role. By explaining the role and importance of a qualified early childhood teacher with the community, a shared understanding and appreciation of the important work teachers do in improving children’s outcomes can be developed.

This study is limited in that the early childhood pre-service teacher beliefs were only examined once in this study. Their perceptions may have changed since their initial participation in the survey following graduation. Longitudinal studies are needed to track early childhood teachers as they enter the field. A longitudinal study would also benefit from not only examining multi-time measurements but also multi-method approaches that include quantitative and qualitative data. More research is also needed within early childhood teacher education on how to effectively allow pre-service early childhood students to become competent to work with infants and toddlers.

Conclusion

This study has provided a small snapshot into the perceptions of 25 pre-service early childhood specialisation graduand teachers who were about to graduate and enter the field. The study has shown that despite learning about infants and toddlers in their teacher education and having a 10-day placement with infants and toddlers, graduating teachers still did not feel confident or competent overall. Other barriers to working with young children included pay levels and the lack of respect for working with young children. Interestingly, pre-service teachers did not mention shift work and long hours as barriers.

If we are committed to the youngest of children in care in Australia, the profession, universities and policy-makers must work together to advocate quality of education and care for infants and toddlers. While quality of education and care had been a focus in kindergarten, it is now time to focus on all children in early childhood settings, including infants and toddlers. This process may start with the identification of infants and toddlers as a specialist area of ECE in research, pedagogy, curriculum and policy. It is recommended that a revision of current ACECQA guidelines for teacher education are considered, as well as universities staffing early childhood education programs with teacher educators who have experience working with infants and toddlers. Part of this recommendation also includes the differences between a primary degree with an early childhood specialisation and an early childhood degree. This study shows graduates from a primary degree do not appear interested in working with infants and toddlers. Further research is needed on pre-service teacher perceptions between the two types of programs. Findings from further studies would inform the design of programs and be highly relevant to filling the current need for early childhood teachers in long day care. Not only will this lead to improved quality, it will also raise the profile of infants and toddlers. It is through stronger advocacy for infants and toddlers that we can enhance the quality of care for all children in early childhood settings.

References


Defining ‘meaningfulness’: Enabling preschoolers to get the most out of parental involvement

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WHILE PREVIOUS STUDIES HAVE shown the potential benefits of parental involvement for children’s learning and development, certain types of parental involvement are considered by some researchers to be ‘ineffectual’ and ‘meaningless’, which leads to the question: What types of parental involvement are meaningful? Adopting Grounded Theory Method (GTM), the study aimed to identify elements that constitute meaningfulness of parental involvement in early childhood education. Interviews were conducted with 23 participants (11 teachers, 12 parents) from three types of early childhood settings in New Zealand. The findings showed that a combination of desirability, practicality and effectuality determined meaningfulness of parental involvement, which was a complex interplay between the dynamics of involvement, activity of involvement and impact of involvement that engaged all parties of the parent–teacher–child trinity.

Introduction

Research has reported that parental involvement in children’s education enhances social skills and academic competence among school-age children (e.g. Nokali, Bachman & Votruba-Drzal, 2010) and has greater positive effects on preschool children’s learning and development (Galindo & Sheldon, 2012; Sheridan, Knoche, Edwards, Bovaird & Kupzyk, 2010). Many influential curriculum models such as Reggio Emilia and Developmentally Appropriate Practice advocate a vital role of parental involvement in children’s learning (Copple & Bredekamp, 2009; Giudici, Krechevsky & Rinaldi, 2001). Some jurisdictions set out mandatory requirements for early childhood services to engage parents. For example, in the United Kingdom, the revised Early Years Foundation Stage (EYFS) ‘confirms partnership with parents as a firm, legal requirement’ (Crowley & Wheeler, 2014, p. 221).

Despite the universal endorsement of parental involvement, in both rhetoric and practice, there is little consensus on the effectiveness of specific parental involvement practices. Over three decades ago, Bruner (1980) described parental involvement as ‘a dustbin term that means all things to all people’ (p. 79). Arthur, Beecher, Death, Dockett and Farmer (2015) contended that ‘asking family members to engage in meaningless tasks such as cutting fruit or covering books, often in isolation from the children, does not encourage families to return and does not build partnership between educators, families and children’ (pp. 42–43). They were concerned about parental involvement being used ‘as a way of getting tasks done’ (Arthur et al., 2015, p. 42). Endorsing Briggs and Potter’s (1999) position, Arthur et al. (2015) asserted that ‘[T]his type of parent involvement is shallow, ineffectual, unrewarding and even frustrating to those involved’ (p. 43). Arthur and colleagues’ assertion, particularly the wording of ‘meaningless tasks’, leads to the question: How can ‘meaningfulness’ of parental involvement be defined? The question necessitates an exploration of underlying constructs of ‘meaningfulness’ of parental involvement in early childhood education.

Epstein (1995, 2001) classified parental involvement into six categories: parenting (e.g. nurturing children, giving them guidance), communicating (e.g. talking regularly with school staff about programs and children’s progress), volunteering (e.g. helping with classroom activities), learning at home (e.g. helping with homework), decision making (e.g. participating in school decision making) and collaborating with community (e.g. utilising community resources). Epstein (2010) listed ‘expected results’ of each category of parental involvement for all parties involved in the school contexts. According to Epstein (2010), for example, parent volunteering could result in ‘improved
skill in communicating with adults’ (p. 87) among students, ‘enhanced understanding of teacher’s job’ (p. 87) among parents, and ‘awareness of parents’ talents and interests’ (p. 87) among teachers. Epstein’s typology has been influential; for example, it was incorporated into the US national standards for family–school partnerships (National PTA, 2009) which was adopted by the New Zealand Parent Teacher Association (NZPTA, 2015) and adapted for use in a number of early childhood education studies (e.g. Henrich & Gadera, 2008). Hoover-Dempsey and Sandler (1995, 1997) identified three psychological constructs to be vital to parents’ basic involvement decisions: role construction (i.e. parents’ understanding of their responsibilities with regard to the child’s education), self-efficacy (i.e. parents’ belief about their competence in helping with the child’s school success), and general invitations and opportunities for involvement (i.e. parents’ perceptions that the child and school want them to be involved). Further, Hoover-Dempsey and Sandler (1995, 1997) identified three contextual constructs that influence parents’ choice of specific forms of involvement: parents’ knowledge and skills, time and energy, and specific invitations from the child and the school. Deriving from research with elementary and secondary school samples, the Hoover-Dempsey and Sandler model has been widely used in early childhood education studies (e.g. Yamamoto, Holloway & Suzuki, 2006). Although Epstein’s typology and the Hoover-Dempsey and Sandler model are established models that help frame our understanding of what parental involvement is and what enhances (or impedes) parental involvement, they do not inform about what determines the meaningfulness of parental involvement. In particular, the concept of meaningfulness is context-bound, and whether, how and why a parental involvement practice is meaningful should be found within an authentic context.

To define ‘meaningfulness’ of parental involvement in the New Zealand early childhood context, a sociocultural perspective needs to be taken. *Te Whāriki* has emphasised ‘the critical role of socially and culturally mediated learning’ (MoE, 1996, p. 9). In particular, the sociocultural nature of *Te Whāriki* implicitly recognises ‘the political nature of societies and cultures and their inherent power dynamics’ (Ritchie, 2010, p. 2). The teaching profession has been considered a site of power, for example Orsati and Causton-Theoharis’ (2013) study revealed ‘the discursive present in complex power relations in elementary classrooms when referring to students with disabilities and behaviour problems’ (p. 514). One prominent feature of New Zealand early childhood education is its bicultural nature. New Zealand early childhood education settings are required to provide children with the opportunity to develop knowledge and an understanding of the cultural heritages of the indigenous *Māori* (MoE, 2014), and respect and practise *Māori* philosophies including *tangata whenua* (people of the land), *whanaungatanga* (human relationships) and *manaakitanga* (caring, hosting and generous) (Williams, Broadley & Te-Aho, 2012). The concept of ‘meaningfulness’ has been explored in disciplines such as philosophy and psychology predominantly on the theme of meaning in life. For example, Baumeister (1991, cited in Baumeister & Vohs, 2002) identified four needs for meaning in life: for purpose, for values, for a sense of efficacy and for self-worth. Nevertheless, no inferences can be drawn from the philosophical and psychological interpretations of meaningfulness to inform the pedagogical definition of meanings in parental involvement since the two have heterogeneous components. Major databases for education such as EBSCOhost, ProQuest and A+ Education were searched for scholarly articles or book chapters that touched on the topic. The keywords used included meaningful, meaningfulness, value and worth along with parental involvement and its variants such as parental participation. All searches yielded no results, which showed that there was no existing research or theory that addressed ‘meaningfulness’ of parental involvement in the context of early childhood education. It became the author’s intention to create a framework to answer the guiding research question: How can ‘meaningfulness’ of parental involvement be defined in early childhood education?

**Methods**

The methodology chosen for the study was Grounded Theory Method (GTM) which was defined as ‘the discovery of theory from data’ (Glaser & Strauss, 1967, p. 1). For this study, GTM afforded several methodological advantages. First, not relying on existing theories and aiming for generating theory, GTM suited the intention to create a conceptual framework. Second, effective on discovering human behaviour, experiences and relationships, GTM suited the topic of parental involvement. Finally, interviews, an established data collection tool for GTM, had long been established in early childhood studies (Goodwin & Goodwin, 1996). Given substantial differences between the two strands (Glaserian andStraussian) of GTM (Urguhart, 2013), this study followed the Glaserian approach consistently, mainly to use its ‘virtue of simplicity’ (Urguhart, 2013, p. 10) in terms of stages of coding.

The ethics approval was granted by the author’s employing institution, and institutional permission to conduct the research given by a kindergarten and its umbrella organisation, a playcentre and its umbrella organisation, and a childcare centre. In New Zealand, kindergarten is owned and operated by a public kindergarten association, mostly caters for children aged between two-and-a-half and five years, and traditionally encourages and relies on parental involvement. Playcentre refers to a parent cooperative where the parents of children attending are responsible for how the centre is managed and operated and provides for children over the age of two years and six months (and toddlers if accompanied by a parent). Child care, formally known as education and care service, is privately owned,
accepts children from birth to five years of age, and has a varied extent and manner of parent participation in the program in different centres (Education Review Office, 2007). Informed consent was given by all teacher and parent participants. In this study, ‘teacher’ refers to a registered early childhood educator who has a three-year Diploma of Teaching (Early Childhood) or equivalent.

Data were collected through interviewing teachers and parents using a ‘relational approach’ which addresses the dynamics of the research relationship, and is ‘aimed at eliciting narratives of lived experience in a two-person setting’ (Josselson, 2013, p. vii). The data collection followed a two-phase process typical for GTM—the initial sampling and theoretical sampling (Glaser, 1978). The initial sample included seven teachers and four parents from the childcare centre, and the theoretical sample included four teachers and five parents from the kindergarten and three parents from the playcentre. All sampled early childhood centres were located in a Central North Island city of New Zealand that had a multicultural population, approximately one-third of whom were the indigenous Māori. A total of 23 interviews (11 teachers, 12 parents) were conducted by the author in October and November 2013, and each interview lasted for 60 to 80 minutes. While there is no consensus on the ideal sample size of a GTM study, the sample size of this study can be deemed moderate (Mason, 2010). Data analysis was carried out adopting Glaser’s (1978) three-stage coding: open coding (going through the data line by line, attaching codes to the data, and staying open), selective coding (grouping the open codes into categories) and theoretical coding (identifying relationships between the categories). Open coding and selective coding were completed with the initial sample, and theoretical coding with the theoretical sample. For theorising, I utilised Glaser’s (1978) tool of theoretical memoing (breaking off to write down my thoughts about the data in memos) which Glaser described as ‘bedrock of theory generation’ (p. 83). The overarching teacher/parent interview question for the initial sample was: ‘Could you describe some of the meaningful moments when you facilitated/participated in parental involvement activities?’ For the theoretical sample, in addition to the overarching question for the initial sample, questions evolving from the open coding and selective coding with the initial sample were added (i.e. ‘What made you facilitate/participate in the activities?’, ‘How were the activities practical?’, ‘What were the impacts of the activities?’). During the interviews, prompts were used to assist the teachers and parents in providing rich and in-depth data and elaborating on selected categories/subcategories; for example, ‘Did your child look different when you were talking with the teacher?’

Findings

The theoretical coding confirmed three themes, nine categories and 33 sub-categories as reported in the following text. The code in parentheses following each quote labels the participant (e.g. KT3 stands for the third teacher participant from the kindergarten).

**Theme 1: Dynamics of involvement**

Three categories of dynamics of involvement (teacher-driven, parent-driven and child-driven) emerged from participants’ reflections on the motivators of parental involvement.

Teacher-driven dynamics was congruent with the construct ‘general and specific invitations for involvement from teacher’ in the Hoover-Dempsey and Sandler (1995, 1997) model, and included sub-categories whanaungatanga, open door and proactivity. Whanaungatanga, a Māori concept meaning attaining and sustaining relationships, was a key driver of parental involvement, as a teacher explained, ‘One of our major kaupapa [approach] is whanaungatanga, so it’s very important part of our relationships with parents ... [as] we really focus on developing relationships with whānau [extended family]’ (KT1). Open door was a policy aimed at maximising opportunities for involvement and allowed parents to observe the teaching sessions at any time. Proactivity denoted teachers approaching parents proactively and innovatively, as a parent depicted, ‘They ask individually what we want for our child ... In that way parents know we get a say, which is what happens here’ (KP5). A teacher illuminated how they tried innovative ways to involve parents: ‘We introduce a different concept to Christmas party. Instead of children receiving a gift they’re in fact making gift given to their parents ... We do have a good turnout to the Christmas party’ (CT2).

Parent-driven dynamics incorporated ‘role construction’ and ‘self-efficacy’ in the Hoover-Dempsey and Sandler model, and included sub-categories aspiration, self-efficacy and role construction. Aspiration pertained to parents’ personal values and expectations about the child, as a parent elucidated: ‘Time is different, when I was a kid, you can leave school when you are fifteen and find a job just like that, but you can’t now ... and I think my duty is setting them up to be a good person that achieves what they are capable of achieving ... ’ (KP3). Self-efficacy denoted parents’ belief about their own ability to support the child, as a parent signalled, ‘I think my involvement is gonna make a huge difference to him’ (CP4). Role construction referred to parents’ understanding of their own responsibility in regard to the child, as a parent illustrated, ‘My mum has to work, she is solo mum ... I don’t agree with my childhood, I don’t think there had been a childhood ... I don’t want to miss that out on my children’ (KP3).

Child-driven dynamics resonated with ‘specific invitations from child’ in Hoover-Dempsey and Sandler’s model, and included disposition and personality. Disposition was concerned with the child’s inclination, interests and ability. A parent attributed her reading the child’s learning story to the child’s interest: ‘He likes to talk about it [learning
story]. There is a picture of him doing the obstacle-a-thon, so he was able to bring home and show his dad who didn’t go, ‘oh this is what I did there’, and he was able to talk about what he did’ (CP3). Personality related to the child’s physical and socioemotional qualities. Explaining why she spent time in the centre supporting her child, a parent recounted: ‘... my child is quite a shy and quiet child, and I wanted to be there, because for me it’s important for him to feel secure and safe in the surrounding, so if I can always try to be there to help guide him through something he’s not done before’ (CP4).

**Dynamics of involvement** triggered, activated and motivated parental involvement. When describing meaningful experiences in facilitating/participating in parental involvement activities, all teachers/parents endorsed, implicitly or explicitly, that the experiences were meaningful because they wanted, needed or liked those experiences. Therefore, the theme **dynamics of involvement** constituted one dimension of meaningfulness of parental involvement: desirability. For any parental involvement practice to be considered meaningful, it should be a desirable practice; that is, it should be wanted, needed and liked by all of the three key stakeholders—teacher, parent and child.

**Theme 2: Activity of involvement**

Three categories of **activity of involvement** (home-based involvement, home–centre conferencing, and centre-based involvement) emerged from participants’ descriptions of their experiences with parental involvement.

**Home-based involvement** resonated with ‘learning at home’ in Epstein’s (1995, 2001) typology, and included sub-categories parenting, toys and play, books and stories, numbers and letters, and community. Parenting referred to parents meeting their child’s physical needs such as feeding and toileting. Toys and play encompassed activities of a creative, entertaining nature, as a parent described, ‘They like to play out in the garden, we got a trampoline at home, so they come and amuse themselves’ (KP1). Unintentional pre-academic activities was sub-categorised as books and stories, as a parent narrated, ‘If they want to sit down and read book with me ... they’ll come next to me and they can choose the book to read’ (KP1). Intentional pre-academic activities were sub-categorised as numbers and letters, as a parent described, ‘She learns how to write the letter V because that’s what she started with, and we ask can you draw a little v, she draws the little v’ (KP4). Community included activities utilising community resources, as a parent narrated, ‘She loves ballet, I’ve taken her to some ballets, she went with Fantasy and we went to see Giselle, Swan Lake, and The Nutcracker’ (KP1).

**Home–centre conferencing** was comparable to ‘communicating’ in Epstein’s typology, and included sub-categories conversation, diary, poster, noticeboard, learning story and interview. Conversation was a valuable form of involvement, as a teacher recounted: ‘The most valuable time I think with parental involvement is when I’m speaking to parents everyday, as they come into the kindergarten, as they come to pick up their children’ (KT1). A diary was used in the childcare centre, as a teacher described, ‘We have a daily diary we have to do, we take pictures in the morning and write a little story about what’s happening in the afternoon ... so if parents do look at them they can see what their children have been doing in the day’ (CT1). The childcare centre also made use of posters to involve parents, as a teacher elaborated, ‘We do posters that tell of what has happened in the month with children, and this is where parents can look at too’ (CT1). A noticeboard was used in all centres, as a kindergarten teacher stated, ‘We’ve got a big noticeboard that we write a lot of information up on’ (KT1). Learning stories, an assessment tool in New Zealand, was also a communication tool, as a parent explained, ‘I read the ones [learning stories] here, I read them quite often, and I quite like it, because it does show what your child is doing … what they are being up to’ (CP1). Interviews was a formal communication tool, as a teacher clarified, ‘Twice a year, we invite parents along, we timetable parents in to spend approximately half an hour to talk about their child, what their aspirations are for the child’ (CT2).

**Centre-based involvement** incorporated ‘volunteering’ in the Epstein typology, and included sub-categories observing, sharing, playing, parenting, scaffolding and housekeeping. Observing reflected parents’ interest in the child’s learning environment, as a teacher described: ‘Parents will look through windows and fences or you will see them coming to pick up their child, they will look from the distance to see what their child is doing’ (KT1). Sharing referred to parents sharing a skill or resource, as a teacher explained: ‘We had two parents just live nearby, they are in the music school, and came up one day and did a performance up here’ (CT1). Playing pertained to parents being engaged in the child’s play in the centre: ‘I notice one of the parents when he comes in he has more fun, playing with the things as children do, he is just like a big kid ...’ (CT7). Parenting related to parents meeting the child’s physical needs which occurred more often in the infants and toddlers group. Scaffolding denoted parents supporting the child in his/her learning. Housekeeping dealt with involvement activities to keep the centre tidy, clean and properly equipped, as a parent described, ‘My partner fixed one of the … they got all these blue drums for water, rain water, goes into this big blue drum, he just drilled the hole and put the tap on for the kids to turn on and off’ (KP2).

The above involvement activities were described by participants as positive experiences and established practices. All parents and teachers affirmed, implicitly or explicitly, that these experiences and practices were meaningful. Therefore, the theme **activity of involvement** constituted another dimension of meaningfulness of
parental involvement: practicality. For any parental involvement practice to be considered meaningful, it should be accepted practice, that is, it should be practical.

**Theme 3: Impact of involvement**

Three categories of *impact of involvement* (*impact on child, impact on parent, and impact on teacher*) emerged from participants’ perceptions of the effects of parental involvement.

*Impact on child* resonated with Epstein’s (2010) ‘expected results’ of parent involvement for students in school settings, and included sub-categories *emotional wellbeing*, *social development* and *learning disposition*. *Emotional wellbeing* related to the child’s positive emotions including increased sense of security, excitement and self-esteem, as a parent explained, ‘When you’re with your children in a playcentre you don’t have separation anxiety, so that’s sort of the safe environment’ (PP1). A teacher recalled the excitement created among children: ‘We had actually been to the gym with the children, and for any trip we need to have parental help … [as] children are excited because they get a go on the bus’ (KT2). The teacher also illustrated how parental involvement enhanced the self-esteem of the child, ‘We have had parents come and make pizza, you see the pride on the face of those children, their parents are doing it,’ “That’s my mum!”’ (KT2). *Social development* comprised behaviour, friendship, interaction and social responsibility, as a teacher elucidated, ‘If a child had a bad night, for argument’s sake, telling the staff the next morning would be really helpful for interactions with that child throughout that day, because that might be why the behaviour is different’ (CT2). A parent described, ‘She wanted to carry on going [to playcentre], and that’s because she has friends there, she enjoys it, she knows the environment’ (PP3). A teacher portrayed the interactions between the children and an involved adult: ‘We have people who come to fix the bits and pieces around the place, something like that, all the children all have known him now, they will go and say “Simon, what are you going to do today?”’ (CT2). A parent interpreted, ‘They do learn social responsibility, they see it, for me, my children see me do the things for the community, not just for my family, it’s about everyone around the surround[ings]’ (KP5). *Learning disposition* entailed the child’s inclination, interests and ability about learning. A teacher reflected on how a child’s interest was affirmed, ‘I think he has seen his mum talking with us about things he is interested in, interests has a big impact, all of a sudden we’ve taken interests in the things he is interested in’ (CT7).

*Impact on parent* echoed Epstein’s (2010) ‘expected results’ of parental involvement for parents, and included sub-categories *learning experience*, *networking* and *gratification*. Parental involvement was a learning journey, as a parent stated: ‘You stay with your child at playcentre session, and that’s part of yourself learning as a parent as well, so rather than coffee group’ (PP1). Parental involvement included networking opportunities, as a playcentre parent described, ‘I just have a chat with other parents while we are supervising, talking about your children, about their development, and getting opinions and suggestions’ (PP2). Parental involvement was also gratifying, as a parent elaborated, ‘I have enjoyed that a lot, going to playcentre, playing with her, and playing with lots of stuff … watching the kids grow too is a big thing, I really enjoy being on duty’ (PP3).

*Impact on teacher* concurred with Epstein’s (2010) ‘expected results’ of parental involvement for teachers, and included sub-categories *motivation* and *multiple roles*. *Motivation* referred to being motivated by parental involvement, as a teacher explained, ‘His parents are watching his learning, watching every teacher … What I like [about] the parents is that they started to do that with him first, and their involvement encourages me to support him’ (CT3). Teacher–parent communication, among other forms of parental involvement, had positive impacts on the teachers. A teacher described how deep communication with a young mum resulted in a disclosure of domestic violence and other issues affecting the child, which led to the teacher playing multiple roles: ‘One young mum we asked her … we talked about her child … and then she started crying … so it’s very delicate sometimes, it’s like you are a social worker, you are a teacher, you are a mum, you are a sister, you are [a] mother figure, you have to know when to put which hat on’ (KT4).

*Impact of involvement* encapsulated various positive effects of parental involvement on child, parent and teacher. All parents and teachers stressed, explicitly or implicitly, that the effects of meaningful parental involvement experiences that they were describing were positive for every one of the teacher–parent–child triad. The theme *impact of involvement* constituted a third dimension of meaningfulness of parental involvement: effectuality. For any parental involvement practice to be considered meaningful, it should be effectual practice, that is, it should have positive effects on child, parent and teacher.

In summary, the data generated multi-dimensional constructs of ‘meaningfulness’ of parental involvement: desirability (desirable practice), practicality (practical practice) and effectuality (effectual practice). Desirability, practicability and effectuality manifested the meaningfulness of parental involvement, and were optimised when all parties of the teacher–parent–child triad were engaged.

Figure 1 presents a model incorporating all themes, categories and sub-categories and relationships between them, and the trinity of teacher, parent and child sets the scene for all relationships. The model illustrates a process showing how meaningfulness of parental involvement is constructed. The process goes from the top of the figure to the bottom. First, three categories of dynamics of
involvement (teacher-driven, parent-driven, child-driven) trigger, activate and motivate three categories of activity of involvement (home-based involvement, home–centre conferencing, centre-based involvement). Subsequently, the three categories of activity of involvement exert different impacts on three different stakeholder groups (child, parent, teacher).

**Discussion**

A crucial issue inherent in ‘desirability’ is that the desire of all members of the community of practice (Hughes, Jewson & Unwin, 2007) should be counted. In practice, tension arises when parent, teacher and child have discordant voices, and is removed when teachers adopt a shared power approach (Orsati & Causton-Theoharis, 2013). The construct practicality is conceptualised to denote whether the activity of involvement is accepted, affirmed, commended or otherwise proved to be practical. The construct is not intended to denigrate innovative involvement practices but to emphasise that they need to be tested for practicality before meaningfulness is claimed. Effectuality foregrounds impact on the child, and includes impact on the parent and teacher. Given the interactions between parent, teacher and child, effectuality in this study conforms to the criterion that any involvement activity should support the child (Stonehouse & Gonzalez-Mena, 2008). To judge whether an involvement activity is meaningful, three questions should be asked: ‘Is it desirable?’, ‘Is it practical?’ ‘Is it effectual?’ If the answers are yes, then the involvement practice is meaningful. According to the model, washing for the kindergarten reported by Parent KP2 is meaningful—‘I think my children feel different, they know the bag I brought home belongs to kindy, because they were searching the bag, they go “you do kindy’s washing mum!” You can see the pride’ (KP2). First, since the activity was driven by the parent (willingness to help) and the teachers (need for help), it was desirable. Second, since the activity had been performed many times and went well, it was practical. Third, since the activity had positive effects on child, teacher and parent, it was effectual.

It is noteworthy that the sub-category *housekeeping* (e.g. washing, cleaning, fixing) of the category *centre-based involvement* resembles ‘cutting fruit or covering books’ which were denounced as meaningless tasks by Arthur et al. (2015, pp. 42–43). It is remarkable that participants gave unanimous endorsement of this type of ‘low-skilled’ involvement with several justifications. First, children should be given the opportunity to observe adults doing labour work in the centre, as a teacher explained: ‘What we want for the children is to be responsible regarding cleaning up as well, and that is all part of being a good citizen, it is all part of social justice’ (KT1). Second, all labour work in the centre contains educational elements, as a teacher elaborated: ‘You are not just here cleaning,
you are here listening to teachers, you are listening to children, you are having conversations and dialogue about what is happening in this community ... so it's all learning' (KT1). Third, the concern over teachers 'using' parents for 'getting tasks done' (Arthur et al., 2015, p. 42) is unfounded, as one teacher illuminated, 'This is a learning and teaching community, we are all in the community together, the parents are doing it, the teachers are doing it, and the children are doing it. Whether you are cleaning or whether you are doing a puzzle with a child, it's all part of the community, these are all the things required to keep the community healthy' (KT1). This study has refuted the assertions made by Briggs and Potter (1999) and Arthur et al. (2015).

The model illustrates the permeating impact of a sociocultural perspective on early childhood education in New Zealand (MoE, 1996). Parents and teachers provided living examples of whanaungatanga, a key concept of the bicultural curriculum, which illustrates locally situated meanings in parental involvement. The sociocultural perspective recognises that meanings are contextual, fluid and at times elusive. The situational attitude towards 'fundraising' offers an excellent illustration for the dynamic nature of meaningfulness. A parent disregarded fundraising because of her personal value and the child's physical circumstance, as she explained, 'I wouldn't let my child go and knock [on] doors to sell bars or anything like that, no ... I just don’t like the concept of my child knocking on strangers' doors and asking them to buy things ... Also my children are dairy and egg free, so I don't have chocolate in my house' (CP1). Also, the meaning of fundraising is understood in its historical context, as a teacher reported, 'When the kindergarten was made into a trust about two years ago, we weren't required to keep the parent committee, so that disbanded. While they were around we did do a reasonable amount of fundraising, we haven't done so much since parent committee disbanded, we get quite a lot of equity funding because we are in the low socioeconomic area, so we are actually able to purchase most of the things we need' (KT1). Fundraising has not emerged as a sub-category of centre-based involvement in the context of this study; nevertheless, it may retain meaningfulness in other contexts.

The model is not intended to include an exhaustive and static pool of the ‘meaningful’ parental involvement practices but to offer a conceptual framework that demonstrates and exemplifies a combination of the relational dimensions and constructs of meaningfulness of parental involvement in early childhood education. Different types of early childhood services in New Zealand may pre-achieve and practise parental involvement differently (Education Review Office, 2007; Zhang, Keown & Farruggia, 2014), for example, the sub-category networking of the category impact on parent in this study was more visible in a playcentre where parents were more involved. Nevertheless, the teachers and parents from the childcare centre, kindergarten and playcentre displayed essentially the same patterns in terms of their interpretation of ‘meaningful experiences’ of parental involvement, and therefore, the model applies to all three types of services.

It is important to note that the model is dynamic and emergent, and it certainly has limitations. Although it includes data from both parents and teachers with an intention for equal weight to be placed on the two voices, it only captures moments when parents and teachers have a shared vision of practice, and does not show how the potentially discordant voices can be mediated, specifically, how the power can be shared in the relationships (Orsati & Causton-Theoharis, 2013). Second, the model recognises space for children’s voices (e.g. child-driven dynamics, impact on child), but the children’s voices have been provided by ‘proxy’ informants (parents and teachers). The model does not include data collected directly from the children, and therefore, the voices of children are not genuinely enacted, which is a methodological flaw that limits the validity of the model. Despite the intricacies of mediating voices and difficulty in obtaining useful data directly from children for the study, future research should tackle these limitations.

Implications

The author makes no attempt to extend the application of the non-prescriptive model to the wider early childhood community; nevertheless, several implications of the model for early years’ practices can be postulated. First, the model suggests a holistic and systemic approach to the meaning making of parental involvement; thus, it expands the scope of potentially meaningful involvement activities and affords teachers an enlarged repertoire of involvement practices. With the affirmation of meaning in those practices, teachers are disposed to implement them more intentionally to realise the potential benefits for children. The legitimisation of ‘low-skilled’ parental involvement excluded by Briggs and Porter (1999) and Arthur et al. (2015) lifts an embargo on certain valuable involvement practices. Second, the model invalidates the ‘one shoe fits all’ approach to parental involvement, privileging no single parental involvement practice over another. The sociocultural approach empowers the practitioners to think and act in ways that are not externally scripted and search for a contextualised, local meaning of parental involvement, rather than simply follow the recommended recipe in the dominant discourse. Third, in spite of the lack of first-hand data from children, the multi-vocality inherent in the model advocates that the voices of all members of the community of practice be heard in the meaning making of parental involvement. Hence, the model encourages practitioners to listen to both parents and children and negotiate and co-construct the local meaning of parental involvement. These implications contribute to enacting parental involvement in a sustained and non-tokenistic...
way. Although the model is derived from the New Zealand context, it is expected that the multi-dimensional, socially and contextually informed, multi-vocal model affords a conceptual framework for defining meaningfulness of parental involvement for early childhood practitioners outside New Zealand.

Conclusion

This study problematises a prevailing conception of parental involvement in the discourse by uncovering three constructs of meaningfulness of parental involvement in early childhood settings in New Zealand: desirability, practicality and effectuality. The descriptions of the parents and teachers in this study bring into sharp focus the richness and complexity of the meaning of parental involvement in a wide range of practices. The conceptual framework generated in the study illustrates a socially and culturally situated approach to making local meaning of parental involvement. The study highlights the importance of negotiation and co-construction of the meaning of parental involvement among teachers and parents. The study is envisaged to make a positive impact on the ways parental involvement is understood and practised in the early childhood education sector. The limitations of the study point to the need for further study of the process by which teachers, parents and children negotiate and co-construct the meaning of parental involvement.

Acknowledgements

This research was funded by Waikari Institute of Technology. I would like to extend my gratitude to all the teachers and parent participants for making the effort to attend an interview.

References


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