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We are walking in, hopefully awake, to a new era in early childhood. It is unfolding around us. Extensive past, current and continuing research supports the expectations of the new era in early childhood. Expectations, when built upon research and practice evidence, empower hope and positive change and with governmental support become new-era realities.

This volume of the Australasian Journal of Early Childhood provides a cacophony of research voices, each of which brings with it evidence-based possibilities and solutions for change at differentiated levels within the wonderful world of early childhood.

Corr, LaMontagne, Cook, Waters and Davis’ cross-sectional study extends evidence for the need to support the mental health and wellbeing of early childhood educators. This research presents associations between Australian family day care early childhood educators’ mental health and their working conditions. With 41.7 per cent of educators surveyed stating that psychological distress and high overcommitment to their work occurs, their mental health and wellbeing appears to be overlooked. Psychosocial working conditions require modification so that workforce training and reforms are extended to on-the-ground practice by family day care educators.

The wellbeing of early childhood educators is further supported by Wong and colleagues’ research. Time-use diary methodology is used in research that aims to increase the effectiveness of early childhood workforce policy through the development of a tool (the time sampling time-use diary) to ascertain everyday work tasks, activities and actions of Australian and United States early childhood educators.

Following on with the theme of service provision is research completed by Harris, Cartmel and Macfarlane. This work focuses on early year’s perspectives on service integration. As part of a broader university study, this research aims at identifying best practice models for an integrated early childhood service delivered as part of a new community service precinct. A need for further investigation in light of potential risks is discovered, with the research highlighting the ‘need to better inform community organisations who are seeking to translate, innovate and implement integrated service models’.

Also embracing community and using Rapid Rural Appraisal methodology and data analysis focused on ‘distilling’, were Giamminuti, Tye, Buckley, Merewether and Kuzich. Their research, based in the south-west of Western Australia was supported by the Centre for Sport and Recreation Research. The investigation into how communities welcome families and young children acknowledges foregrounding their research with the Italian town of Reggio Emilia. How towns and communities are enabled to provide ‘hope’ trajectories for their children is explored.

Using social-constructivist methodology, Diamond and Whittington investigate early childhood educators’ views on the value of their work, specifically regarding learning about brain development in young children. Data analysis from this study results in four major themes becoming evident. The need for support of professional engagement with neuroscience and early brain development is one conclusion from the research.

Kilderry’s research supports early childhood practitioners by providing valuable insight into why early childhood educators may find the practice of intentional teaching difficult in Australia. Critical discourse analysis of semi-structured interviews ‘shows how developmentally appropriate practice discourse is legitimated, marginalised and silenced in certain curricula practices’.

Using a mixture of qualitative and quantitative methodologies, Fleet, Soper, Semann and Madden provide evidence for the need for increased support for early childhood educational leaders. The research finds perceptions of the roles of educational leaders are evolving and are not as clear as they need to be during this period of change. This research also finds that there are high expectations on the Educational Leader, whilst his/her role remains unclear with the need for clarification of the role of the Educational Leader evident. Additional support for educational leaders is advocated and a call is given for further investigation to enrich the current limited knowledge base.

Cheeseman, Sumsion and Press’ paper is titled Infants of the productivity agenda: Learning from birth or waiting to learn? It embraces the needs of the most vulnerable members of the early childhood community—children aged birth to three years. This analysis into the Australian Productivity Commission Inquiry into Childcare and Early Childhood Learning finds that the Productivity Commission’s call to substantially lower educators’ qualification requirements reflects an image of the child as waiting to learn. Reflection leaves one pondering if this image—being contrary to Australian early childhood policy (wherein the image of the infant is that of a learner from birth)—presents juxtaposition at governance level.
The National Quality Standard Assessment and Rating Instrument is examined by Jackson. The research provides support to practitioners and authorised officers with positive results supporting the reliability and validity of the Australian assessment and rating process for Australian early childhood care and community centres.

A research paper written by Zhang explores the voice of the child in Australia and New Zealand. An extensive literature review of journal articles across the past 10 years identifies a ‘gap between the child’s voice rhetoric and research practice’. Four voice types manifest and are examined as both distinctive and intertwined with each other. Zhang’s aim is to support the ongoing provision of strong quality in the collection and analysis of child-related data.

Taylor, Cloney and Niklas advocate for positive change to the trajectories of at-risk children. The research suggests that by assessing skills and abilities of at-risk children in their early years, positive change may be enhanced. Solid statistics are presented to reflect a need for action to improve outcomes for at-risk children. This research brings significant results as it acknowledges and builds upon the extensive research of Australian E4Kids, wherein 2498 three- and four-year-olds were participants.

Deans and Cohrssen highlight seven categories of spatial thinking and visualisation (mathematical concepts) within spontaneous dance experiences of four-year-old children. Observation and recognition of their findings may provide possibilities for children to extend conversations and engage in higher order thinking and connectedness to other concepts.

Nirmala’s review of quality care for infants/toddlers in Singapore, although worked from a small number of participants, presents results that include commonality of epistemological beliefs between educarers, supervisors and parents.

We trust you are challenged by this volume of the Australasian Journal of Early Childhood to add fresh new-era understanding to your lived realities.

Roslyn Heywood
Chinchilla Christian School Kindergarten and OTEN W, Sydney TAFE
Introduction

This research was undertaken as part of a broader project commissioned by a community-based organisation seeking to identify best practice approaches to delivering an integrated early childhood service as part of a new community service precinct and residential development. For the purposes of the current project, the organisation broadly defined integration as a single geographical location where all care and support services work together as far as practicable, to positively impact community members. In this context, integrated early childhood services refer to local services delivering integrated early education and care for children, alongside parenting, family support and health services, links to employment opportunities and other community resources, including multi-agency and community partnerships (e.g. Aubrey, 2007; Corter, Janmohamed & Pelletier, 2012).

The organisation had acquired a ‘greenfield site’—‘a blank slate’ for which they were enthusiastic about harnessing the energies of the organisation and community to create a visionary master-planned development for children, families and the wider community. In addition to integrating residential development, retail and other places of work, the organisation sought to integrate community service programs, including a range of early years’ services. This included identifying opportunities to integrate day care, flexible care and other early childhood, family support and health and community service activities to improve access to services and supports available to the community. The organisation’s vision therefore emphasised place-based, program-based and workforce integration.

For a number of years now, international and domestic policy approaches have reflected the need for practitioners and professionals to be prepared to work in integrated, transdisciplinary settings (e.g. COAG, 2006; FaCIA, 2004; OECD, 2006; Queensland Department of Communities, Disability Services and Seniors, 2006). Increasingly, however, it is recognised that working in integrated settings can be complex and challenging. As a result, reflective practice approaches have been emphasised in order to increase understanding and build consensus across disciplines and with partners (Cartmel, Macfarlane & Casley, 2012; DETE, 2013).

Moore and Skinner’s (2010) review of the evidence-base for integrated practice in the early years suggests four levels of integration are required. This includes policy
integration, local integration of planning, service delivery integration and integration of teams and professional roles. The degree to which these are achieved are reflected in a continuum of joined-up service arrangements increasing in relationship intensity from co-existence, to cooperation, coordination, collaboration and integration (Moore & Skinner, 2010).

Several characteristics of effective integration of early childhood services are identified in the literature. These include a universal and inclusive service base, using multiple entry points and ‘soft-entry’ points where core services are available to everyone and are inclusive, non-stigmatising and welcoming, as well as assertive outreach programs to engage key target groups. Integrated services provide a mix of strategies and interventions in a range of formats to meet community needs; in particular, vulnerable families (e.g. Macfarlane, Nolan & Cartmel, 2014; Moore & Skinner, 2010; DETE, 2013; Wong, Sumision & Press, 2012). Integrated service networks with coordinated local planning and governance, including hub models, community-based partnerships, community engagement and capacity building and creation of supportive community environments are also identified as critical components of an integrated service delivery model (e.g. ARACY, 2011; McFarland-Piazza, Allen & Webb, 2013; Moore & Skinner, 2010; Wong et al., 2012).

While the complexities of integrated service arrangements are widely acknowledged in the literature, there appears to be an absence of empirical investigations regarding some of the risks or unintended consequences that may warrant consideration. Indeed, a search of the literature for the risks or unintended consequences of integration in the early years revealed no such evidence existed at the commencement of this research project. There remains a paucity of guidance in the published research for initiating change at the whole-of-community level, let alone any specific guidance to minimise any unintended consequences or associated risks that should be considered. An exploration of early years’ sector perspectives of integrated practice and some of the benefits and associated risks were therefore explicit focuses of this study.

**Methods**

The scope for the literature review undertaken was identified by the community organisation leading the project who also nominated specific international and national models of interest. Database searches including Web of Science, JSTOR and Auslit were undertaken using the search terms ‘integration/integrated’ and ‘early years’ and ‘risks’ or ‘unintended consequences’. Grey literature sources included locally sourced reports and information identified by key informants and researchers.

To inform the broader project, key informant interviews were used to explore internal and external stakeholders’ perspectives in depth (e.g. Legard, Keegan & Ward, 2003; Mason, 2002; Miller & Crabtree, 2004). Viewpoints were expressed and clarified as informants presented their experience and understanding of the project and this meant content could be clarified immediately (Lawson, 1985). A core interview schedule containing 10 questions relating to the broader project’s needs was used to structure the interviews. Questions using an appreciative enquiry approach (e.g. Mellish, 2000) to build on existing strengths within the organisation were excluded from the current study which focused on stakeholder perspectives of integrated services in the context of the proposed development. This included a particular focus on the identification of strengths and weaknesses and the associated opportunities and risks, consistent with best practice strategy formulation for non-profit organisations (e.g. Bowman & Bowman, 2010; Helms & Nixon, 2010).

After receiving approval for the study, a total of 11 internal and external stakeholders were invited to be key informants for the research project. As outlined in Table 1, these included different service managers and practitioners within the organisation, external providers of early childhood services from other non-government agencies, as well as academic and state policy experts who all agreed to participate. Key informant interviews were conducted between March and April 2012.

<table>
<thead>
<tr>
<th>Internal key informants (n = 6)</th>
<th>External key informants (n = 5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive control team members (x 2)</td>
<td>Funding body representative</td>
</tr>
<tr>
<td>Early years service managers e.g. family day care (x 4)</td>
<td>Consultant</td>
</tr>
<tr>
<td></td>
<td>Academic</td>
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<tr>
<td></td>
<td>Early years’ sector service partners (x 2)</td>
</tr>
</tbody>
</table>

All interview participants received an information sheet and their written consent was obtained to participate in the study and make their results available for other research purposes. The data was de-identified to indicate only whether respondents were internal or external key informants to ensure particular views were not able to be recognised. All interviews were conducted in person or via telephone, with the responses manually transcribed and stored on a secure network at the university.

The data was analysed to identify unique contributions as well as common themes and ideas using a process of analytic induction (e.g. Lofland & Lofland, 1996; McFarland-Piazza et al., 2013). The typology of this information helped to identify the conceptual categories used to summarise interview responses. Each response was intended to provide its own insight; however, common threads were evident, with the frequency that particular issues, themes or concepts were mentioned used to identify issues of
significance (Mason, 2002). Responses to the questions relating to identification of the strengths and weaknesses of the proposal and associated opportunities and risks were summarised and organised using a SWOT/SWOR analysis approach (Bowman & Bowman, 2010; Helms & Nixon, 2010).

**Results**

The findings are presented separately for responses to the question on integrated practice and results of the SWOR analysis. To elucidate meanings of integrated practice, sample responses provided by the key informants ($n = 11$) are presented for each of the summary themes identified. Indications of whether responses were from internal or external stakeholders are provided in parentheses. The results of the SWOR analysis are presented diagrammatically.

**What does an integrated service mean to you?**

**A one-stop shop:**

‘A place where the needs of parents and children can be met in the one place’ [internal key informant].

The informant recognised that a range of services including early learning and care for children between the ages of birth and 12 years as well as allied health services would be situated on the same site.

**Integration:**

‘Integrating fostering, housing, aged and child care’ [internal key informant].

‘It’s about bringing our best to the table and looking at how we can work together to improve outcomes for children and families’ [external key informant].

‘Building community and building family connections’ [internal key informant].

Integration in the first instance related to thinking about how distinct services for families and children could be drawn together to improve access for families needing support.

**Structural integration:**

‘Need a model to deal with the different layers’ [external key informant].

‘Concerned with the economy—economies of scale’ [external key informant].

The informants were focused on the financial implications of reducing overheads and having one administrative point for activities such as human resources or purchase of goods. However, the participants were wary of assuming that all participants in the services would be able to utilise the same facilities.

**Making connections across the lifespan:**

‘All ages, lots of scope for different projects’ [external key informant].

‘Integration means bringing everyone together—making connections’ [internal key informant].

There was a sense that the compartmentalisation of age groups was detrimental to wellbeing. Having different age groups together was seen as an opportunity to model behaviours and foster a common sense of purpose.

**Commitment and purpose:**

‘Integration is not just physical, it relates to purpose’ [internal key informant].

‘Is more than just bringing the different bits together’ [external key informant].

Theoretical and empirical evidence was important in helping the organisation plan a way forward, in relation to integration.

**Integrated service models are still emerging:**

‘Currently only scratching the surface of integrated practice’ [external key informant].

Informants noted a variety of integrated practices across Australia. No two examples were the same, as they appeared to emerge out of the geographical proximity of community focus.

**Inter-disciplinary and transdisciplinary approaches:**

‘Requires new roles to break down silos’ [internal key informant].

‘New type of worker that is not discipline based’ [internal key informant].

The complexity of the qualities of the workforce were acknowledged. Staff in integrated services would need to have the capacity for collaborative activities as well as specialist professional knowledge.

**SWOR analysis**

The results of SWOR analysis are presented in Figure 1. As indicated in this figure, a number of advantages were identified, consistent with the aims of integrated practice identified by respondents. The main disadvantages identified related to the scale of the proposal and the massive task the organisation has set itself to better respond to the needs of the community. Opportunities for the community, the organisation and staff were identified, as were opportunities to build on the evidence base for integrated practice. Risks highlighted the potential for a number of unintended consequences including integration for the sake of integration, implications for mixing services and settings for children and older people as well as the potential dominance of different professions, services and agendas. The heavy reliance on effective leadership to manage the project and associated change processes and lead transdisciplinary practices were also highlighted.
Other results

A range of additional comments and information were collected in the interviews. This was reported as part of the overall project report to the community organisation. The findings from the key informant interviews were therefore considered in the context of the broader study and a discussion of the relevant literature.

Discussion

The results of the key informant interviews revealed a number of innovative aspects of the proposed initiative and corroborate many of the features of effective integration of child and family services as identified in the literature (e.g. Moore & Skinner, 2010; Pelletier & Corter, 2005; Wong et al., 2012). However, while there are many examples and models that share commonalities, there are as yet no examples equating to the vision for the proposed development which will integrate services across the lifespan with other community spaces, community infrastructure and a residential development with a village square. In the context of the current project, responses suggested integrated services refer to co-location and a one-stop shop model with transdisciplinary staff delivering integrated programs across the lifespan and external and broader structural integration. A commitment to integrated practice and clear sense of purpose were identified as important considerations, with numerous examples within and external to the organisation identified that can be built on. Examples such as Reggio Emilia, UNICEF’s framework for action for Child Friendly Communities and the Apartments for Life model were identified as providing more specific guidance for approaching integration with the broader community spaces and infrastructure systems (e.g. ACSA, 2012; Benevolent Society, 2009; REAIE, 2011; UNICEF, 2004).

A number of new opportunities were identified in the context of the proposed development. Beyond the development of best practice models to inform future service development and delivery models, they included opportunities for integrated governance (e.g. British Government, 2010), unique benefits for staff and the broader community as well as specific opportunities for the organisation, early years’ sector and researchers (e.g. Corter et al., 2012; Moore & Skinner, 2010). Many of the advantages identified, including opportunities for improved...
support and outcomes for children and families, recruitment and retention of transdisciplinary staff, the development and implementation of best practice approaches and even the fostering of inter-generational links, mirror existing knowledge (e.g. Corter et al., 2012; McFarland-Piazza et al., 2013; Moore & Skinner, 2010; Nicolescu, 2008; REAIE, 2011; Wong et al., 2012). However, there remains a paucity of evidence in the literature in relation to the benefits (and risks) associated with economies of scale in the short and longer term and integration of services across the community and lifespan.

It is not surprising that the results of this study indicated both a strong will for and general support and commendation for the organisation’s innovative proposal. Some of the concerns identified and a lack of guidance available in the literature, however, suggests that more research is required to better identify, understand and manage any unintended consequences and the potential risks involved. These included the need to ensure service integration and innovations are not an artefact of service needs or reflective of ‘integration for the sake of integration’. Other concerns suggesting ‘that early childhood education and care may get lost’ are indicative of those initially raised by Cheeseman (2007). Indeed, such concerns regarding the silencing of pedagogical approaches as a consequence of the dominance of health and welfare agendas would appear to be increasingly evident in the literature (e.g. Macfarlane et al., 2014; McFarland-Piazza et al., 2013; Wong et al., 2012).

Despite all the available supportive evidence, good intentions and strong community and organisational values, the disadvantages and risks identified by key informants are potentially real and significant. The identified risks primarily related to change management issues and management of internal processes, stakeholder expectations and inter-generational links. It is recognised that the complexities of organisational systems and integrated practices are in themselves significant, let alone the complexities of communities, community dynamics and community issues as ecological perspectives demonstrate (e.g. Bronfenbrenner, 1994). The benefits for those who will be engaged and no doubt become strongly embedded in the new community development are obvious, but what does this mean for those not engaged and on the outer? How is this ultimately reconciled with the underpinning values and rationale for integrating early years’ services?

Beyond any associated organisational risks, the identified need for and reliance on strong and effective leadership to drive effective service integration suggests the potential fragility of such initiatives. Consistent with McFarland-Piazza and colleagues’ (2013) findings, not only are effective systems and processes critical, but key informants, in particular external stakeholders, suggested the success of these initiatives depend on the leadership of key individuals and their human and social capital. This reflects the significant focus on effective leadership in the early childhood literature (e.g. Hard, 2006; Macfarlane, Cartmel & Nolan, 2011; Muijs, Aubrey, Harris & Briggs, 2004; Rodd, 2006; Woodrow & Busch, 2008). Beyond this, however, there remains an absence of discussion in the available literature regarding some of the other risks and potential disadvantages identified in this study. These include the size and complexity of such initiatives, pragmatics such as that it may be more expensive in the short to medium term and concerns about mixing older people and young people. This indicates an urgent need for more research and evaluation to inform both the proposed development and related community service integration initiatives, in particular in the context of early years’ services.

Conclusion

The results of the current study were designed to explore stakeholder perspectives in relation to the proposed project. They do not provide a detailed analysis of the potential risks of such an integrated development nor were they elicited solely for the specific purpose of researching this objective. The exploration of issues with key informants is therefore limited to the questions asked in keeping with the objectives of the broader project. While the literature indicates the frequent application and validity of SWOT or SWOR analyses as a strategic planning tool, debates regarding the over-simplification and inherent tautology of this approach, as well as the need for further research to determine its potential for theory building, are also acknowledged (Helms & Nixon, 2010). Accordingly, it is recognised that both the review of literature and research methods used were determined according to the organisation’s specific needs. However, the researchers also recognised that both the broader project and results of the current study offer important insights and perspectives which add to the existing literature.

It is clear that a more urgent need exists in relation to better informing community organisations who are seeking to effectively translate, innovate and implement integrated service models. This is particularly the case when the scale of such initiatives involves the whole community and the integration of services and community infrastructure across the lifespan. While the study’s results do not represent a comprehensive list of risks and unintended consequences, they do suggest there are a range of potential risks that demand greater consideration, research and guidance, given recent developments in the early years’ sector, community service sector and what is at stake for the community more broadly.

Acknowledgements

This study was commissioned by Churches of Christ Care as part of the Model of Care Research Project for Early Childhood Services. In particular, our thanks are extended to Jane Carter, Ross Dinnar and fellow members of the
Executive Control Group for their vision and the leadership, participation and support of this project and the associated manuscript. We also sincerely thank all the internal and external stakeholders who participated in this project and contributed their valuable time and expertise.

Endnote

It is acknowledged that since the commencement of this project, the organisation’s concept of ‘integrated development’ has evolved and as a result, community development approaches are currently being emphasised to actively engage the community to build the project and generate personal buy-in.

References


Studying early brain development: Educators’ reports about their learning and its applications to early childhood policies and practices

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Victoria Whittington
University of South Australia

THE UNIVERSITY OF SOUTH Australia’s online course ‘Brain development in the Early Years’ is a response to Mustard’s Thinker in Residence Report (2008) which recommended the early childhood educator workforce acquire knowledge about young children’s brain development. This research investigated educators’ views on the value for their work of learning about early brain development. Data comprised responses to course content in online course discussions and a standard anonymous online course evaluation instrument, written by 45 in-service and pre-service educators enrolled in the course. Analysis revealed four themes regarding educators’ statements about the value of brain development knowledge for their roles as educators: ‘Working with families’, ‘Working with children’, ‘Advocacy’ and ‘Working across services’. Themes are described and illustrated with examples from students’ writing. Findings are discussed in terms of the impact of educators’ knowledge about brain development on their thinking about their professional practice.

Introduction

Recent findings from neuroscience accompanied by intensive policy and advocacy work by Mustard, Shonkoff and others have raised the profile of the early years and their importance to individuals’ lifespan capacities. Developmental neuroscience, particularly epigenetics (how environments affect gene expression), has established that the quality of children’s earliest environments is critical to the strength of their developing brains’ architecture. This in turn determines children’s future capacity to learn, their physical and mental health and their ability to regulate emotions (NSCDC, 2007). Mustard (2008), Devonshire and Dommett (2010), and Iles et al. (2010) have argued that relevant findings from neuroscience should be made available to educators to inform educational contexts for children. Mustard referred to the need to close ‘the gap between what we know and what we do’ (p. 37).

For 10 years policy analysts have noted that in policy and practice, most government institutions work in ‘silos’, despite society’s most common and serious problems including child abuse and mental illness demanding ‘joined up approaches’ (Stanley, 2008, p. 3). Joining this critique, the Ministerial Council for Education, Early Childhood Development and Youth Affairs (MCEECDYA, 2010, p. 15) observed the limitations of silos, noting that ‘often practitioners delivering a parenting initiative will have either a Health or Education or Welfare background … Therefore, often the messages delivered [are] through the single professional “lens” of that practitioner rather than a suite of integrated early childhood development messages’.

To put ‘joined up thinking’ into action, in 2011 the South Australian Government established the Department for Education and Child Development (DECD), reorganising services offered to young children and families by bringing together responsibility for child protection, child and family health services, education and child care. To facilitate such integrated approaches to supporting early childhood development, Mustard (2008) recommended:

The universities should establish education programs for all staff working in early child development in order to ensure that they have a common knowledge base about experience based brain development that is relevant to their work (p. 7).

The University of South Australia’s (UniSA’s) course ‘Brain development in the Early Years’ (henceforth referred to as ‘the course’) is a response to this recommendation. Neuroscience can be used to improve early childhood
practice; however, enabling access to neuroscience-based information in a digestible form is critical to bridging the gap between specialised knowledge and educator practice (Illes et al., 2010; Shonkoff & Bales, 2011).

The course and its students

This exclusively online course is offered annually as an elective to all students at UniSA. Beginning in 2009 with just 25 students, the course has exceeded its quota of 100 students annually. Of students enrolled in 2010 and 2011, 50 per cent were experienced preschool educators. Another 35 per cent were enrolled in undergraduate pre-service teaching programs, predominantly early childhood education. The remaining students (not included in this study) were enrolled in 15 other degrees, including social work, psychology, nursing and occupational therapy.

Course content

Making neuroscience findings relevant and accessible to educators is pedagogically challenging. Shonkoff and Bales (2011, p. 17) observed that it requires explanation of complex science to those who are not scientists. They recommend communication of a ‘core story of development’, one that uses metaphor and terms such as ‘brain architecture’ and ‘toxic stress’ to convey meaning. The course draws on the ‘coherent narrative’ provided by the National Scientific Council on the Developing Child (NSCDC) (Shonkoff & Bales, 2011, p. 29) and Mustard’s legacy as Adelaide Thinker in Residence, aspiring to meet ‘the challenge of transcending the cultural barriers that separate the worlds of science, policy and practices’ (Shonkoff, 2000, cited in Shonkoff & Bales, 2011, p. 19).

The course involves 12 weeks of study. Content includes the brain’s role in controlling all aspects of development, early neurological development processes, epigenetics, experience-dependent plasticity, critical and sensitive periods and the effects of adverse environments. Topics include brain structures, prenatal brain development, roles of nutrition, sensing pathways, stress pathways and trauma in brain development; and roles of brain development in language development and in later physical and mental health, behaviour and capacity to learn. Applications to professional practice are threaded throughout and also comprise the final topic. The goal of the course is to enable graduates to better support children’s development through extending their knowledge base and requiring them to make links to practice.

The course draws extensively from multi-modal sources: pertinent websites, YouTube clips, video streaming, journal articles and book chapters. Key course references are the NSCDC Working Papers, the Early years study 2 (McCain, Mustard & Shanker, 2007) and the Canadian video resource, The science of early child development (NSCDC, 2007).

Online learning

Course lecturers strive to engage students by presenting course content in ways that take advantage of the online environment, including video-streaming of world experts talking to professionals about their research, diagrams and images and links to relevant textual and video websites. Set questions for weekly topic online forums give students opportunities to discuss their learning, including professional and personal experiences. Students are expected to make links between course content and professional practice.

‘Online learning’ refers to ‘the use of the internet to access learning material: to interact with the content, instructor and other learners; and to obtain support during the learning process, in order to acquire knowledge, to construct personal meaning and to grow from the learning experience’ (Anderson & Elloumi, 2004, p. 5). The online mode was chosen as it affords maximum access to students and control of their own learning. Gwekwerere, Hoipkemeier and Trombley (2005) found that online learners value the opportunity to take such control, to set their own learning routines and to interact with other learners by expressing their ideas in writing as part of a learning community. These studies indicate online learning involves social constructions; that meaning is constructed ‘in and out of interaction between human beings and their world’ (Crotty, 1998, p. 42). Analysis of students’ online discussions is in essence social construction, because it focuses on understanding the meanings that students co-create in response to course content. Thus social construction is an appropriate theoretical model for this study.

Previous investigations of students’ online experiences have used a range of methods to investigate student online learning experiences. Stodel, Thompson and MacDonald (2006) interviewed students; Edwards, Perry and Janzen (2011) employed narrative inquiry with graduates of a program that was taught online; and Dey, Burn and Gerdes (2009) used a focus group design. The method used by McLoughlin and Myard’s (2009) analysis of online discussions was considered a valid, expeditious and unobtrusive way to address the research questions, because online discussions present students’ ideas and understandings, unmediated by research participation processes.

The study aimed to investigate educators’ (hereafter called ‘students’) comments regarding the value or utility for their work of learning about early brain development. The research question was: What did students say about the value of course content for their roles as educators?

Methodology

This study used a social constructivist paradigm as explicated by Crotty (1998). The data set comprised students’ online discussion contributions and anonymous responses to a course evaluation instrument (CEI).
Once university ethics approval was obtained and the course completed, the researchers requested consent from the 2010 and 2011 cohorts to use their de-identified online contributions. Participants comprised 45 students from UniSA's teacher education programs.

Following Braun and Clarke’s (2006) process for thematic analysis, participants’ comments were coded, including those about the value of the course content for their work. In a recursive process, collated codes were organised into themes, which were defined and named and checked against the research question and aim. Thematic analysis allows researchers to interpret and summarise participants’ ‘experiences, meanings and … reality’ from their comments (Braun & Clarke, 2006, p. 81), providing new insights.

Results and discussion

Students wrote extensively in course discussions and in CEIs about course content, providing a rich data set. CEI data showed students found the course to be very worthwhile professionally.

It should be a core subject, not just an elective, due to its significance to education. Everyone should be made to learn about brain development in the early years. It is so relevant and important. This subject, for me is ‘up there’ amongst the most valuable and practical subjects I will have studied in this program (CEI).

Data analysis revealed four major intertwined themes regarding the course content’s value for educators’ work: ‘Working with families’, ‘Working with children’, ‘Advocacy’ and ‘Working across services’.

Each theme is now described and illustrated, followed by a discussion pertinent to that theme. Brackets indicate participants’ identity codes or CEI data.

Working with families

‘Working with families’ pertains to students’ comments about the course content’s value for their role with families. Students wrote that they saw with new eyes the importance of this role.

Getting to know a [child’s] family is important in planning a learning environment that caters for the individual child (01).

Sub-themes were ‘Communicating with families about children’s development’, ‘Extending educators’ current roles to better support families’ and ‘Linking personal and professional learnings to better understand families’.

Communicating with families about children’s development

Students wrote that the course strengthened their capacity to discuss children’s development with families. Isn’t it great that we can now more confidently share our learning [with families] about children’s brain development in the light of our current study? (04).

Students agreed that information about brain development in the early years should be made available to parents.

I believe it is not enough for us, as teachers, to be educated about stress pathways and abuse and how they affect a child’s development, parents and caregivers also need this knowledge (03).

This agreement led to discussion about who should provide this information, recognition that educating families about brain development can be an educator’s role and ways educators can usefully but cautiously provide this information to families.

[We] do not need to bombard the parents with too much information and detail, just enough to be clear and informative and if they need more information [they] can seek more (17).

Students also recognised that supportive relationships with parents enable information flow.

Positive relationships with parents and caregivers are so vital, so we can understand why children behave the way they do (15).

Students conversed about how supportive relationships can be nurtured. They recognised that reciprocal relationships and the creation of welcoming environments are crucial and require perspective-taking, critical reflection and effort.

We are often the first point of call which is why I believe it is vital to offer the most welcoming, secure and safe environment that we can for … families … Forming honest and non-judgemental relationships with families will help give them the security to open up. This process will not always happen immediately as we need to earn their trust … to show from the start that we care and that we are available to our families (09).

Having a space where parents feel comfortable is a great step in reducing the stress levels in preschool children. … We feel the way we offer and conduct [individual family conversations] is far too formal and will be endeavouring to create a lounge room feel for future conversations … We are also going to try to connect with parents on their home territory rather than ours, in the hope that we portray our core value that we respect and value each child and their family from whatever their background (42).

Extending educators’ current roles to better support families

To better support early brain development, students recommended engaging with families before their children commence kindergarten.
As a teacher in the 4–5-year-old age bracket … I think we need to do more work with parents and even … ante-natally to make the maximum impact (01).

Two playgroups function on non-kinday days at our site and I believe closer partnerships between kindy and playgroups could provide wonderful opportunities … Wouldn’t it be great if funding included kindy staff support of playgroup sessions? (04).

Linking personal and professional learnings to better understand families

Students wrote that course material enabled them to understand aspects of their own lives. Regarding a childhood friend whose life had been troubled and who she later found out had been sexually abused, one student wrote:

Behaviour is not what a person does to be intentionally bad or naughty; it is a person’s way of communicating a developmental need that has not been met. Before undertaking this course I couldn’t understand why my friend turned out to be such a depressed and anxious adult. … Having this understanding will help me be more tolerant and supportive (14).

Such insights enabled greater understanding of families.

Brain development is another tool we can use when trying to understand the complexities some children and families bring to the table. A very worthwhile tool! (28).

Students’ recognition that parents’ behaviours are brain-based led to understanding that blame is unhelpful and that the focus should be on supporting family functioning.

There is no point saying such parents are wrong or bad, especially those who struggle with addictions of any kind. … Our focus should be on the positive things we can do to help build knowledge and [give] support to families (05).

Discussion

The importance of educators developing and maintaining relationships with parents to support children is a continuing theme in the early childhood literature (Duncan, Bowden & Smith, 2006). Early Childhood Australia (ECA) (2006) posits ethical imperatives that early childhood professionals: develop relationships with families based on mutual trust (II, 3); listen to families (II, 5); and are ‘sensitive to the vulnerabilities of children and families’ (II, 9). This study indicates the course triggered a renewed recognition that, consistent with Wise (2007), effective work with families is part of educators’ responsibilities and includes educative and supportive roles with families whose children are not in a statutory service. A specific aim of DECD (2011, p. 8) is ‘to support every family so that, right from the start of a child’s life, all young South Australians have the opportunity to become happy, healthy and safe members of our community’, to be achieved ‘by working together more closely with families’. This study indicates studying brain development in the early years strengthens educators’ resolve and capacity to meet this aim and become prepared and committed to meeting the MCEECDYA aspiration ‘that all ECD professionals promote key messages from … neuroscience during contact with parents and children’ (2010, p. 20).

Working with children

Educators’ work with children is the main focus of their professional role, requiring actions that draw upon educators’ deep understanding of children’s development. Students stated that learning about early brain development was very relevant to this work.

It has made me look at children in my care in a new light (CEI).

This newly emerging understanding and knowledge about brain development and stress, epigenetics and sensory pathways has caused me to stop, rethink and take another look at children, their activities and their learning … I have been teaching for over 30 years and although often this process reinforces what I am already thinking … it is now supported by knowing the WHY and HOW of what is happening with children and their brain development. Hence it raises new questions in terms of relevant planning and shines a new light on my understanding (36).

Three sub-themes were identified: ‘Relationships’, ‘Pedagogies and the learning environment’ and ‘Educators’ interpretations of children’s behaviour’.

Relationships

Students said the course heightened awareness of the critical role of their relationships with children in supporting children’s learning and reducing the negative impact of stress on their brain architecture.

The [course] readings demonstrate that isolation can inhibit brain development as children learn through engaging reciprocal relationships and experiences. We need to … support [the children at our kindergarten] in the development of their relationships with us (22).

Pedagogies and the learning environment

Students made links between their pedagogies, learning environments and children’s brain development.

Learning about epigenetics and the sensing pathways has helped me to begin to more fully understand the ‘whys’ and ‘hows’ in differences in children’s play, brain development and ultimately learning. This now informs assessments … and my planning (36).

It has been very enlightening to realise that all of these [preschool] experiences will influence the expression of genes … Such consideration drives me to constantly work to improve the quality and quantity of these
experiences, in order to provide each child with as many opportunities for optimal development as is possible (27).

In response to information on the development of neural sensing pathways, students shared how this aspect of children's development can be supported in programs.

A safe, stimulating and invigorating environment will provide every child with the opportunities needed to continue their development. As some children are in my care for more hours than they are in their parents’ care, the environment we provide is crucial and ultimately their main environment. To create stimulating environments for infants I need to include materials such as textured mats (touch); books made from cloth/paper/plastic (seeing); musical instruments (hearing); tummy time (movement); sucking on food/bottles (taste) and smelling of different foods (smell) (19).

In response to information on the harmful effects of chronic stress on brain development, students recognised the importance of educators reducing children's stress levels by being predictable and calm via routines and touch. Such awareness prepares the ground for pedagogical change.

At an educator level, I have an enormous responsibility to provide ‘quality care that positively impacts on children's cortisol levels’ (Sims, Guilfoyle & Parry, 2005, p. 36). This research encourages me to maintain reflective practices, provide a flexible routine that considers individual needs, [and] build supportive relationships and environments with staff and families (31).

As teachers our response has to be repetitive and predictable—delivered with caring understanding, and emotionally supportive (17).

To reduce children's stress, students also recommended pedagogies and content that build on children's cultural knowledge and interests and continuity of values systems between the setting and home.

To support the development of Aboriginal children we need to acknowledge their background and respect their way of life and what they hold dear to them … Family and connection to the land are the most important aspects in raising their children to become confident and involved members of their community. Through a safe, secure and caring environment children can be exposed to their heritage … have family members and Elders involved in their education and express their spirituality through stories, arts and their connection with the land and kinship systems (25).

Educators’ interpretations of children's behaviour

Students wrote that course content enabled them to better understand that children’s behaviour has biological origins resulting from gene–environment interactions as described by Nelson, Moulson and Richmond (2006, p. 261). They now saw how environments shape gene expression and thus both short- and long-term behaviours. Students more deeply understood that environments which meet children’s needs for security and emotional support are most likely to result in behavioural improvements. Course content thus encouraged them to discard notions of children as ‘naughty’.

From an educator’s perspective, understanding what may have happened prenatally; for example maternal stress caused by abuse, poverty, war, medication or other drugs, can be helpful in understanding postnatal behaviour in children (14).

Understanding the cause of behaviour is paramount in establishing caring, trusting relationships with children, because children behave in response to their environment and expect a certain behaviour in return. If brain development was more deeply understood then children could be nurtured for their strengths and personalities rather than be labelled by their behaviour as naughty or mischievous (14).

I have realised through my readings that, in relation to young children's stress pathways, it is important to not just dismiss some tantrum-related behaviour as the child trying to get their own way, but to work with the child to calm them, model appropriate behaviours and use reciprocal interactions to resolve the situation … assisting the child to find ways to resolve situations without being highly reactive and thus reduce cortisol levels (27).

Students identified that effective support of children's brain development involves seeing inappropriate behaviour as communication about the child’s state. They recognised dissociative and anti-social behaviours as children's signals and responded accordingly.

We have developed strategies for dealing with separation anxiety and reducing cortisol levels in the bloodstream (25).

Discussion

Early childhood services are typically considered in terms of structural quality, referring to staff qualifications, room sizes and child–adult ratios; and process quality, referring to interactions and communication (Taylor, Cleveland & Thorpe, 2013). In the course, students focused on process quality, at the heart of which are the relationships so critical to children’s development and education. Brain development research findings state unambiguously that quality, reliable relationships strengthen children’s development in all domains (NSCDC, 2004). Students demonstrated enhanced recognition of the developmental role of what Cooper, Hoffman, Marvin and Powell (2000) called ‘secure base’ child–adult relationships, initiated by adults. They also understood that children who have stress and trauma in their lives need calm, predictable environments with routines. Such relationships buffer against stress (NSCDC, 2007).
Students came to recognise that their pedagogies had the power to create environments that were either supportive or deleterious to children's brain development. Their comments show that although they may not have dramatically changed their pedagogical approach in response to course learnings, they now understood the link between their pedagogy and children's brain development. They came to understand, consistent with Gunnar (2006), that children need programs attuned to brain development sequences that acknowledge and value their culture, heritage and individual needs and reduce chronic stress.

Students now saw that environments inform gene expression and thus children's current and later behaviours, as emphasised by McCain et al. (2007) and the NSCDC (2010). Students considered that the course would enable them to form better relationships with children because they were now more able to understand and interpret children's behaviour. Students now recognised environments that meet children's needs for security and emotional care are those that best support behavioural change.

**Advocacy**

Advocacy refers to students' comments about course content and educators' roles as advocates for young children and their families. Students referred to their aspirations for advocacy roles in response to course content.

I believe that we need to be advocates for all children, especially in light of this information and research (01).

In my continual practice as a teacher ... advocating for our children's healthy futures will ideally bridge the gap between lack of knowledge experienced by the general public [and] the wealth of knowledge supplied from medical and scientific research (30).

Two sub-categories were 'Being informed advocates within early childhood sectors' and 'Advocacy within the wider community'.

**Being informed advocates within early childhood sectors**

The brain development research field is fast-moving. Students recognised the challenge of remaining current, informed advocates.

There is not enough training for us in this area at present (01).

Students referred particularly to the importance of building staff awareness regarding the crucial role of brain development in the early years and implications for practice.

I feel responsibility to ... share my knowledge about brain and behaviour development with the other carers so that we are working to provide the children with stable and predictable interventions (32).

Recently our childcare manager told us ... that when working or settling children we should place them on a seat next to us or in the pram in close proximity. I didn't like this idea much as I felt children were seeking the reassurance of a cuddle and one on one time. Now, I have the evidence to back up why (25).

One student reported how she used her brain development knowledge to advocate for a child for whom she had concerns.

No one else [at work] took my concerns seriously, or they did not see the signs that were so obvious to me. ... It took a few dramas to bring it to serious attention (07).

Students acknowledged that effective advocacy requires educators to learn more about evaluating their practice.

We will need to go down the path of how we gather data to assess our success (24).

Students recognised they could use brain development knowledge to inform practices in co-located services.

We have playgroup in the room on a non preschool day and I feel that I would like to pass on information to the co-ordinator so she can provide lots of activities for the children (15).

Those of us in school-based preschools are in an ideal position to forge links with our schools and impart our growing knowledge on the importance of healthy brain development (24).

Students applied a brain development-informed, critical lens to early childhood education and school policies.

If intervening in a child's early years is recommended, then Universal Access has been implemented without looking at the consequences for the future of many children. Should Universal Access be implemented at the expense of Playgroup and Pre-entry programs which create learning opportunities for younger children and their parents? (03).

[Carlson 2006] on the importance of touch resonated deeply with me. ... The guidelines that our employer gives us, restricts us in the amount of touch that we are supposed to use when engaging with the children in our care. ... Maybe some of the guidelines for working with children need to be re-visited! (01).

**Advocacy within the wider community**

Students used a brain development-informed lens to critique laws. Concerned about the effects of teratogens on brain development, one wrote:

Too many big companies have been allowed to dump pollutants into the atmosphere putting profit above people (01).

Students referred to the gap between neuroscience knowledge and public policy and identified specific supports, workplace practices, public policies and programs that could help reduce familial stressors.
Scientific knowledge is revealing the effects of early life stresses … but little is being done to help and implement strategies to reduce the stress on families and their young children in everyday circumstances (07).

Students proposed that brain development information be communicated to the wider community, including tomorrow’s parents.

Information needs to be passed through schools, communities, parent groups and the media (02).

This course should be made compulsory, not just an elective, so other [students] have the opportunity to see how our brain is influenced by our lifestyles, genetics and choices (02).

Education of children about the importance of matters relating to brain development can and should continue right through a child’s education into high school (04).

This notion led to the idea that educators’ role might include informing the community and leading change.

As a parent I don’t think I have ever been given any information from [a] doctor, nurse or any person in regards to brain development! Perhaps this is an area we could develop ourselves? (05).

Students asserted that information about brain development in the early years requires community-wide responses.

It is great to … see communities pulling together and making positive changes … All too often … problems are … someone else’s responsibility to fix (05).

Discussion

The course invigorated students’ commitment to their role as advocates for children. ECA’s Code of ethics (2006, IV, 4) states that early childhood professionals have a responsibility to ‘advocate for the development and implementation of laws and policies that promote child-friendly communities and work to change those that work against child and family wellbeing’.

Bammer, Michaux and Sanson (2010) referred to discrepancies between scientific knowledge about the crucial processes required for healthy brain development and governments’ policies and practices. ‘Effective advocates [require] … the ability to identify conditions, issues and policies that negatively impact children and families and also understand their relatedness’ (Kieff, 2009, p. 101).

Increasingly the early childhood field gives support to the notion of educator as an ongoing learner and sharer of knowledge (ECA, 2006, III, 5, VII, 2 & VIII, 3).

Working across services

The final theme, working across services, concerns students’ comments about implications of course content for work with and within a range of services for children and families.

Recognising that infancy and family life are critical to brain development, students expressed frustration with fragmented family services and the need for more coordinated interagency work:

I have been in contact with community health nurses in the local community to request regular visits to childcare services, however they are well understaffed and there just is not enough of them to go around. This is overwhelmingly disturbing. … [I recommend funding] to support mothers with more regular health nurse home visits which will also link with child-care settings so there is more of a community support network to improve outcomes for children (10).

Another focus was record-sharing between services to ensure continuity, reducing the negative effects of stress hormones on brain development.

I become worried when children move to other centres or transition to school. … I think it’s important to be able to pass on records to help with a smoother transition, to help reduce stress and hence provide better outcomes for children (08).

Students wanted to work more closely with currently co-located services to better support early brain development.

I could work with the playgroup co-ordinator in educating parents coming through our community (15).

Students referred to the value of interdisciplinary work with families, recommending this approach to provide children with environments that support early brain development.

Learning Together … a teacher … supervising a playgroup for parents and children 0–4 years … aims to educate parents about the important skills learnt through play, songs and stories in a stimulating environment. This type of program could also provide early identification of, and proactive intervention for at-risk children and families … [and] could be expanded to include coffee and a chat with a health professional or counsellor. Wouldn’t it be great if this type of program could be introduced to more preschools? (03).
Discussion

In the course, students were asked to make inferences about applications for professional work based on their previous experiences and what they had learnt about brain development. Students’ recommendations for integrated, interdisciplinary professional work echo Sanson and Stanley’s (2010) call to break down disciplinary ‘silos’ to allow more cohesive responses to social issues that impact on health outcomes. They also supported Mustard’s (2008, p. 5) recommendation for ‘universal early childhood development and parenting centres linked to local primary schools’ providing integrated services including child care and preschool education. Our findings indicate the course strengthened students’ understanding of the need for interdisciplinary work and commitment to such ways of working. Such commitment is required to overcome the ‘layers of tradition, and the mosaic of funding patterns’ which can make integration ‘difficult and slow’ (Mustard, 2008, p. 38). As coordinated action depends on shared understandings (McInnes & Nichols, 2011), common use of the language of brain biology and brain-based processes (e.g. ‘sensory pathways’, ‘cortisol production’, ‘prefrontal cortex’) as explained and used in the course is likely to facilitate interdisciplinary work.

Summary

This study found that students in the course valued its content for their work. Specifically, the course strengthened students’ commitment and ability to support early development by building predictable, attuned, calm, stimulating and respectful relationships with children and their families. Students understood that such relationships are important buffers for children who have experienced major stressors and traumas. They now considered themselves better able to meet children’s emotional needs for security. Students now understood links between pedagogies they employed and children’s current and future physical and mental health, behaviour and capacities to learn. Students said they were now able to use developmental neuroscience to understand children’s behaviour, to advocate for them and to call for integrated, interdisciplinary professional work. It can be concluded that educators learning about developmental neuroscience lays a foundation for improved early childhood practice.

Limitations of this study and recommendations for further research

Students were not specifically asked to comment on how far elements of the course content influenced or changed their thinking about the role of childhood educators. The researchers assumed that students’ posted comments arose from the course expectation that they link their learning about brain development with professional practice and the students’ own desire to declare new thinking and influence the thinking of peers. The data collection method meant the researchers could not know numbers of students who subscribed to particular approaches. Frequently students sent ‘I agree’ messages to each other in the discussions, but there is no way of knowing how unanimous students’ thinking was. A future ‘before and after’ study comprising Likert-scale responses from the whole cohort could test changes in students’ thinking.

This study’s sample was limited to education students. Mustard (2008) argued the implications of neuroscience findings for communities and societies were of such importance that, irrespective of discipline, all university students should undertake studies in basic neuroscience because this knowledge was central to any type of work. The researchers acknowledge the importance of eventually extending the research sample to students from other disciplines.

Conclusion

Students’ responses to course content indicated that it had considerable impact on their thinking about their professional practice. It can be concluded that the course supports the development of what Sims (2010, p. 111) described as the three responsibilities of future early childhood services, where ‘staff see themselves not simply working with children, but having responsibilities towards families and the community in which they are located’. When educators engage in professional learning about early brain development they are better positioned to strengthen early childhood education provision for children, their families and the wider community.

References


Introduction

The practice of *intentional teaching* has gathered interest since it was formally introduced to the Australian early childhood community in the national framework, *Belonging, Being & Becoming: The Early Years Learning Framework for Australia* (referred to as the national framework hereafter) (DEEWR, 2009, p. 6). According to the national framework, intentional teaching ‘involves educators being deliberate, purposeful and thoughtful in their decisions and action’ where educators are to ‘move flexibly in and out of different roles and draw on different strategies as the context changes’ (DEEWR, 2009, p. 15). In a similar way, Epstein (2007, p. 1) maintained that intentional teaching ‘does not happen by chance’; it is through ‘planful, thoughtful, and purposeful’ actions where the teacher recognises an opportunity for a child to learn academically or developmentally. Furthermore, Epstein states that intentional teaching can occur ‘regardless of whether children engage in child- or adult-guided experiences’ and elaborates on this point to say that it is the educator’s role to create a supportive learning environment and to develop the right type of teaching strategies to ‘advance children’s thinking to the next level’ (p. 2). Both definitions of intentional teaching include more than teaching and imparting skills and knowledge to children, they encompass teacher decision making, intentionally planning and creating supportive learning environments.

Some recent Australian studies have focused on exploring the practice of intentional teaching in early childhood education and care (ECEC). For example, in their study, Thomas, Warren and de Vries (2011) investigated teacher talk within play-based learning and intentional teaching of mathematics in ECEC. They found that discourses of play and intentional teaching are both ‘enabled and constrained’ by the ways early childhood teaching is viewed and constructed (p. 69). Fleer and Hoban (2012) drew on cultural-historical theory in their research and analysed how educators used intentional teaching as a way to co-construct digital animations about science concepts with young children. Their curriculum investigation found that the technology of ‘Slowmation’ can highlight some of the ways intentional teaching can be understood and enacted. In their recent analysis of educators’ understandings of intentional teaching, Leggett and Ford (2013) shift the focus from intentional teaching to include intentional learners and intentional curriculum (inserted italics). By introducing such notions they have signalled that intentional teaching in ECEC cannot rightfully exist without considering other important aspects in this equation—children as intentional learners. Leggett and Ford’s (2013, p. 48) contribution to the discussion about intentional teaching moves our thinking along to recognise the ‘child’s right for active participation’ which in turn, strengthens the ‘teacher-learner nexus’.

Intentional pedagogies: Insights from the past

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**CONTRIBUTING TO RECENT RESEARCH** findings and discussion about educators’ multiple understandings and enactments of intentional teaching, this paper sheds light on why early childhood educators might find the practice of intentional teaching problematic. It presents research findings from a study conducted in the state of Victoria a decade ago that investigated how dominant discourses influence teacher decision making in early childhood education and care (ECEC). The study found that teacher-directed practice was legitimated, marginalised and silenced by teachers in the study. Through the process of looking back to look forward, insights gained from a critical discourse analysis illustrate why intentional pedagogies, such as intentional teaching and teacher-directed practice, might be difficult pedagogical practices in ECEC in Australia.
the concept of intentional teaching to include intentional learners makes an important contribution to how teaching and learning are understood and constructed in ECEC. It shifts the emphasis from the adult to including the child. However, what is missing from Leggett and Ford’s (2013) analysis of educator understandings of intentional teaching is how dominant discourses can influence teacher decision making and pedagogy. Thus, this paper reports on research findings about how dominant discourses can influence this topic. The paper makes the case about why some educators might show reluctance for embracing intentional (adult-initiated) pedagogies.

In this paper, the term ‘educator’ is used to describe adults who work with children (DEEWR, 2009). Alongside the term ‘educator’, the term ‘teacher’ is also used to describe qualified early childhood teachers. The reason for using both terms, educator and teacher, is that ‘teacher’ related terms such as ‘teacher-directed practice’, were used in the study.

**Shifting notions of pedagogy**

Working definitions of *pedagogy* in ECEC vary according to different educational traditions, understandings and teacher epistemologies in each context. Pedagogy in ECEC can include the ways in which early childhood teachers provide for children’s learning, how the learning environment is designed and the techniques and strategies used to do this (Stephen, 2010; Wood, 2009). Some interpretations include more than the skills of teaching and learning and take into account social and holistic ways of working with people, where learning, care and upbringing are interconnected facets of life (Moss, 2006).

In 2007, before the introduction of the national framework, Cheeseman noted that there were pedagogical silences in Australian early childhood social policy. The implications of this ‘silence’ according to Cheeseman were that pedagogy in ECEC could be potentially reduced to ‘models addressing developmental deficits and preparation for later stages of schooling rather than recognising the potentials of children and their universal rights in the present’ (2007, p. 250). Traditionally, instead of referring to *teaching*, early childhood educators have maintained that they create learning environments reflecting their perceptions of what play should look like (Gibbons, 2007). The role includes classifying children’s behaviour, development and learning within a play context to see whether certain skills and dispositions are being acquired (Gibbons, 2007). Conceptualised from a developmental view, pedagogy in ECEC is often said to be more about the ‘process of waiting for children to grow and learn on their own’ rather than direct instructions coming from teachers (Greishaber, 2008, p. 507). Thomas and colleagues (2011) argue that the contexts from which constructions of teaching have developed in ECEC are due to various histories, positioning and theoretical approaches. They state that ‘young children’s learning is positioned as occurring within the “natural” context of play’ (p. 70).

Intentional pedagogies, whether adult-initiated, adult-led, or teacher-directed, have been contentious in ECEC, particularly as they can conjure up ‘school-like’ pedagogies and practices. Rather than an early childhood teacher ‘teaching’, a view where teachers are ‘facilitators’ of children’s learning has been dominant in the literature (Logue & Harvey, 2010). Accommodating a range of views, the national framework defines pedagogy in broad terms and states: ‘early childhood educators’ professional practice, especially those aspects that involve building and nurturing relationships, curriculum decision-making, teaching and learning’ (DEEWR, 2009, p. 9). Moreover, the national framework defines pedagogy to include intentional pedagogies, with the inclusion of ‘intentional teaching’ (DEEWR, 2009, p. 6).

### A balancing act: Intentional pedagogies and child-initiated learning

Intentional pedagogies are occasions where educators have deliberate (intentional) planned actions in mind, such as setting up the environment a certain way, or demonstrating, modelling and teaching children new skills, knowledge or ways to learn. One such practice—intentional teaching—uses ‘strategies such as modelling and demonstrating, open questioning, speculating, explaining, engaging in shared thinking and problem solving to extend children’s thinking and learning’ (DEEWR, 2009, p. 15). In addition to the notion of intentional teaching including ‘deliberate, purposeful and thoughtful’ (adult) actions, the national framework states that intentional teaching is the ‘opposite of teaching by rote or continuing with traditions simply because things have “always” been done that way’ (p. 15). By stressing the point that intentional teaching does not necessarily include rote-learning, the national framework steers educators away from rote-learning, instead advocating for a full range of intentional teaching practices.

Another type of intentional pedagogy is *teacher-directed practice*. It includes similar features to intentional teaching, but it does differ. Teacher-directed practice is where teachers intervene in children’s play and learning and teach particular skills and knowledge to children. It is almost the antithesis of the practice where children learn through (uninterrupted) play and discovery with no or minimal adult interventions (Logue & Harvey, 2010). Teacher-directed practice has been defined in this study to include practices where educators or teachers direct or lead children’s learning, they step in to children’s play to intentionally model or teach children particular skills and knowledge.

As the literature on child-centred practice and intentional pedagogies reveal, there is no one preference for a type of pedagogy or practice that is suitable for all children across the different types of ECEC settings and contexts. Instead, interpretations of pedagogy are mediated by expectations of particular management structures under which educators...
operate and by the type of knowledge that educators have been introduced to in their early childhood teacher education programs (Edwards, 2005; Nuttall, Coxon & Read, 2009; Smith, 1997). In some cases, educators might be introducing more adult-initiated learning experiences to their teaching repertoire to add some balance to the child-initiated learning opportunities; whereas in other contexts, at times, prominence might be given to child-initiated and child-led experiences, as this way of working may not have been privileged. Over the years, educators, authors and academics have defined, redefined and debated child-initiated practices in relation to adult-initiated pedagogies. Subsequently, wide ranging views of child-centred and child-initiated practice have been expressed (for example, see Burman, 2008; Chung & Walsh, 2000; Langford, 2010; Walkerdine, 1998). Affirming the notion that early childhood educators have not always embraced pedagogy as a concept, Stephen’s (2010) study in the UK found that early childhood practitioners were hesitant in engaging with the discourse of pedagogy. However, Stephens’ study noted the importance of practitioners understanding pedagogy, as the understandings can shape practice and potentially make a positive difference to practice and children’s learning.

Captured on an early childhood education intentional pedagogies continuum, Table 1 illustrates some of the different ways early childhood educators and scholars have conceptualised adult and child pedagogical participation and involvement. The aim of the continuum is to present adult and child pedagogical participation on a spectrum, so that the range of practices is recognisable and the different approaches can be acknowledged. This spectrum allows for wide-ranging pedagogical approaches, where educators take into consideration their teaching philosophy, their unique setting, the political context and diverse learners (children), families and local community members. As Wood (2013, p. 99) reminds us, ‘too much intervention [in children’s play] can be as problematic as too little’.

### Table 1. Early childhood education: Intentional pedagogies continuum

<table>
<thead>
<tr>
<th>Adult-initiated practices</th>
<th>Child-initiated practices</th>
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</thead>
<tbody>
<tr>
<td>Adult-initiated (practice/learning/teaching)</td>
<td>Child-initiated (practice/learning/experiences)</td>
</tr>
<tr>
<td>Adult-led (practice/learning/teaching)</td>
<td>Child-led (practice/learning/experiences)</td>
</tr>
<tr>
<td>Teacher-directed (practice/learning/teaching)</td>
<td>Child-directed (practice/learning/experiences)</td>
</tr>
<tr>
<td>Intentional teaching</td>
<td>Intentional learning</td>
</tr>
</tbody>
</table>

Shifting the notions of intentional pedagogies further, Langford (2010, p. 124) advocates for a ‘democratic pedagogy in which human agency and the capacity to actively interpret, choose, reject and change a professional identity are at the forefront’. Working from a similar frame, Robertson, Kinos, Barbour and Pukk (2014) are in the process of reconceptualising adult- and child-initiated pedagogy. They have begun to consider adult and children’s involvement and participation in practice within a democratic frame, advocating for a democratically appropriate practice (DeAP). DeAP is where children’s worlds (learning) are acknowledged alongside adult worlds (education, teaching and ways of working) in a respectful, participatory and democratic way. Theorising early childhood pedagogy in these ways allows for attentive consideration to be given to how pedagogy is framed, conceptualised and enacted. To shed some light on why early childhood educators might have difficulty with defining and enacting intentional pedagogies, such as intentional teaching and teacher-directed practice, developmentally appropriate practice as a main influence on practice requires some explanation.

### Developmentally appropriate practice

Developmentally appropriate practice (referred to as DAP hereafter) is where educators meet the developmental needs of young children through an individual and age-appropriate approach, doing away with subject areas as a basis for curriculum (Copple & Bredekamp, 2009). Within the DAP approach, teaching is informed by children and their developmental needs (Graue, 2008). Moreover, DAP was developed to minimise trends where children were exposed to content and learning that was too advanced (Graue, 2008). The practice is particular to ECEC and has distinguished pedagogy from formal schooling approaches. DAP is recognisable as a discourse due to practices where children’s developmental appropriateness is measured by matching children’s individual developmental levels to the child’s developmental need (Copple & Bredekamp, 2009). DAP has influenced Australian ECEC for almost 30 years (Edwards, 2005; Farquhar & Fleer, 2007) and was found to be a dominant discourse in the Victorian preschool context a decade ago (Kilderry, 2012). Due to its expansive reproduction of social practices, giving legitimacy to certain values and interests, there are elements of this discourse that are apparent in current times (for example, see Leggett & Ford, 2013).

### Looking back to look forward

To better understand why early childhood educators might be struggling with the notion of intentional teaching, intentional pedagogies, including teacher-directed practice are examined in this paper. Research findings from a decade ago provide insights into early childhood teacher decision making and what influences these decisions. The
study was set in a context where early childhood educators had freedom to choose their own curriculum and pedagogy. This was a time in Australian history when there were no mandated national (curriculum) frameworks, or mandated curriculum frameworks at the state level (Victoria) for ECEC (birth to five years). Consequently, the study was able to take advantage of this situation and examine teacher decision making at a time when early childhood teachers were relatively autonomous in deciding curriculum content. The opportunity to study teacher decision making without the influence of a national curriculum framework has since passed, so this historical examination is unique in being able to provide insights about early childhood teacher decision making.

The study

The study was conducted in 2004 and later finalised as a PhD thesis in 2012 (Kilderry, 2012), a time when Victoria did not have a mandated nor a non-mandated curriculum framework guiding content and pedagogy for the preschool (year before school) year. This position enabled an examination of influences that affected teacher decision making with minimal curriculum content guidance from the state. Evolving from the desire to investigate what influences early childhood teachers in their decision-making processes, the research question focused on in this paper is: How do dominant discourses position early childhood teacher decision making?

Participants and data collection

To identify and examine influences affecting teacher decision making, three early childhood teachers working in Victorian preschool settings (the year before formal schooling where children are usually four–five years of age) were invited to participate in the study. The three participants were early childhood teachers working at the preschool level within the state of Victoria. Each of the early childhood teachers was working within a Victorian state-funded preschool program in the suburbs of Melbourne. Christiana (all participant names and centres are pseudonyms), a recent graduate in her second year of teaching in a kindergarten (preschool) and director of a sessional (stand-alone) state-government-funded kindergarten: Green Street Kindergarten. Ruth had over 30 years teaching experience as a primary and early childhood teacher and was teaching and directing preschool programs in an early learning centre that was part of an independent school: Hillbridge Grammar School. Ethical protocols were maintained throughout and the study adhered to university ethical and legal requirements.

The teachers participated in semi-structured interviews (Kvale, 1996; Silverman, 2006) scheduled across the duration of a Victorian school term (approximately 11 weeks). Each teacher was interviewed at least three times for a minimum of four hours in total. A total of 21 hours of interview transcripts were collated and transcribed, along with an examination of policy documents. This study viewed interviewing as a form of encounter, one where people negotiate and interpret information (Schostak, 2006). With this in mind, to provide scope for participants to talk about their decision making and related issues, semi-structured interviews (Silverman, 2006) were used. Interviews were considered to be interactional events, co-produced between the interviewee and interviewer, where both draw on everyday understandings (Silverman, 2006). Critical theory (Gramsci, 1971) was the underpinning framework used for the study and enabled taken-for-granted understandings to be uncovered within ECEC policies (policy findings are published elsewhere, see Kilderry, 2014) and teacher interviews.

Data analysis

The data was analysed using Fairclough's (2001, 2003) approach to critical discourse analysis (CDA). Critical discourse analysis is concerned with social relations and language; it is through the analysis of patterns in language that insights into common sense understandings can be made. Discourse refers to the ways in which people represent the world. Discourses are recognisable through sets of social practices and associated language that are found in common-sense assumptions in particular contexts (Fairclough, 2001, 2003). Discourses can encompass a ‘coordinated pattern of words, deeds, values, beliefs, symbols, tools, objects, times and places’ and are continually changing and being reformed (Gee, 2011, p. 36). Critical discourse analysis uses both micro analysis (including linguistic, semiotic and different forms of linguistic analysis) and macro analytic tools to describe how social formations and relations of power can be constructed (Fairclough, 2003). One of the benefits of CDA is that it can identify knowledge and practices that are privileged; knowledge and practices known as legitimated knowledge (Fairclough, 2003). Legitimation is recognised through social actors providing explanations or justifications about social practices, or giving particular social practices legitimacy or authority (Fairclough, 2003). Another way to uncover discourse in operation is to identify marginalised discourse. To do this, interview transcripts were analysed for instances of knowledge and practices being relegated to occupying compromised positions (Fairclough, 2003). Compromised positions occur when social actors are in a position that they are not entirely satisfied with, or where they have to make concessions (Fairclough, 2003). To recognise silence in discourse, instances in the transcript data where there were obvious gaps and where particular social practices were missing from the text were identified.
Findings: Teacher-directed practice legitimated, marginalised and silenced

Teacher-directed practice includes practices where teachers direct children's learning and actively model or teach children particular skills and knowledge. Table 2 provides examples for each of the ways teacher-directed practice was understood across the interview transcripts. The way each of the participants understood teacher-directed practice is discussed in turn, commencing with Ruth, then Lily and Christiana.

Table 2. Teacher-directed practice

<table>
<thead>
<tr>
<th>Teacher-directed practice</th>
<th>Legitimated</th>
<th>Marginalised</th>
<th>Silenced</th>
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<tbody>
<tr>
<td>‘Children’s learning is enhanced by well-chosen and meaningful interactions … and interventions by the staff or by the teacher’ (Ruth, TR2:28)</td>
<td>‘Children don’t just learn through play, they also need some scaffolding as they just can’t … [learn what they need to on their own]’ (Lily, TL1:11)</td>
<td>‘If children were “really that bad with it” [the skill of drawing], I would set it up as an experience [in the room] as they come and go’ (Christiana, TC3:81)</td>
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</tr>
<tr>
<td>(Ruth, TR2:28)</td>
<td>‘I am “not pushing” academic learning’ (Lily, TL4:74)</td>
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Teacher-directed practice legitimated: Ruth

Ruth’s interview accounts show evidence of her legitimating teacher-directed practice. In Excerpt 1, Ruth questioned the learning children might be missing out on within an exclusively free-play environment.

Excerpt 1.

1 *Ruth*: If you provide children with a totally uninterrupted play environment, at
2 what point do you assist the children in understanding values and concepts of
3 showing respect and all those sorts of things? Because they don’t necessarily,
4 automatically just happen. (TR2:28.)

Ruth exhibits a high level of certainty in her statements about an uninterrupted play environment (Excerpt 1). This is shown through her rhetorical questioning, ‘… at what point do you assist the children in understanding values and concepts?’ (Line 2, Excerpt 1). The way this question is phrased indicates that Ruth understands there is ‘no point’ at which educators can teach values and concepts in an uninterrupted play environment. Through her rhetorical questioning, Ruth has legitimated the social practice of educators directly teaching values and concepts to children. This view is in contrast to DAP, where children's learning is to come about from their own individual and personal experiences, discovery and free-play (Copple & Bredekamp, 2009). For example, Ruth views the curriculum practice of children learning through play as one where adult input is required to enhance children's understanding: ‘because they [children understanding values and concepts] don’t necessarily, automatically just happen’ (Lines 3–4). The phrase ‘because they …’ is a grammatical feature called a ‘connector’ (Fairclough, 2003, p. 98), connecting an uninterrupted play environment (Line 1), children’s understanding (Line 2) and the notion of learning not automatically happening (Lines 3–4). The use of the connector links these ideas, reinforcing the premise that the type of learning required does not always happen in an uninterrupted play environment. Ruth’s comments in Excerpt 2 confirm her view that adult-initiated interaction can enhance children’s play.

Excerpt 2.

1 *Ruth*: My philosophy is … children learn through play, however their play is enhanced by well-chosen and meaningful interactions and at times, interventions
2 by the staff or by the teacher. (TR2:29.)

Teacher-directed practice is further legitimated by the way Ruth understands her role as teacher and that of other staff, to interact thoughtfully in children’s play and intervene where necessary (Excerpt 2). She also notes the importance of choosing carefully when to interact with children and what to say as part of those interactions. The phrase ‘my philosophy is’ (Line 1, Excerpt 2), is a declarative statement containing a degree of certainty and truth (Fairclough, 2003, p. 117) and shows Ruth’s conviction regarding children learning through play along with ‘meaningful interactions’ provided by teachers (Line 2).

In line with teacher-directed practice, Ruth understands the role of the teacher is to interact meaningfully in children’s play. Free-play can refer to the type of play espoused in DAP, that is child-initiated and allows children to practise new skills (Bredekamp & Copple, 1997). On the contrary, children’s play, according to Ruth, is an opportunity for children to learn via meaningful interactions and, at times, through (well-chosen) interventions by staff. On this basis, Ruth maintains that teachers can ‘make a difference in children’s play’ (TR1:27). To do this, the teacher, ‘with all her skills and knowledge, as an early learning professional [she] should be able to gauge at what point it becomes
interrupted play’ (TR1:26). That is, skilled teachers and educators are able to make professional judgements about opportune times to intervene in children’s play when the aim is to enhance children’s learning.

In Excerpt 3, Ruth’s view of ‘uninterrupted play’ is explained further. She describes how she remembered the concept of free-play when entering the ECEC field many years before.

Excerpt 3.
1 Ruth: When the free-play concept came in … staff stood back and drank their
2 coffee on the edge of the sandpit and [children] [did] their own thing for the
3 next three hours. Which is fine [not interrupting children’s play] sometimes, it
4 depends on the children and the group. That can be fine sometimes, but it might
5 not necessarily be [ok], if you look at all this other learning that can happen. (TR1:26.)

In the depiction of the concept of free-play (Excerpt 3), Ruth implies that some early childhood educators take a non-interventionist approach to children’s play and because of this they might miss opportunities for children’s learning. Even though Ruth legitimates teacher-directed practice, she does so with some influence from the DAP discourse.

Teacher-directed practice marginalised: Lily

In the interview transcripts it is apparent that Lily sometimes marginalises teacher-directed practice and at other times explores the possibility of teacher-directed practice. In the following excerpt, Lily partially endorses teacher-directed practice through her questioning about how she could move a child on in their learning.

Excerpt 4.
1 Lily: Sometimes I think with art, like how do you get a child
2 [to paint differently] … like I had a child last year who was just painting,
3 painting, painting, and every day he would completely cover the art easel
4 [with paint] and I thought well, if they [children] are not taught or shown or
5 helped to get past that they may never get past it. With learning you do have
6 to have something … (TL1:11.)

Lily maintained that children’s learning may stagnate and not move past a particular point if they are not taught or shown alternatives (Lines 5–6, Excerpt 4). Lily said that you do have to ‘do something’ (Lines 5–6), implying that teachers should directly ‘teach’, ‘show’, or ‘help’ (Lines 4–5) children learn. However, Lily does not state how she will directly teach children skills, so that learning opportunities can be picked up on. There is a silence about how this practice might be carried out.

In contrast to the silence, in another episode Lily explained how she considers extending children’s literacy learning after they have watched the Letterland® instructional phonics CD. In this episode it is not clear to what extent Lily would like to directly teach concepts to children, but she does provide children with the opportunity to learn literacy concepts after children have viewed the Letterland® instructional phonics CD.

Excerpt 5.
1 Lily: With [learning] the alphabet everyone is using Letterland®. So the children
2 are telling me Letterland® letters and names. They know it all. I am thinking,
3 that I am following on from that [in my program], but I am not pushing it. I
4 mean that there has to be an advantage if they know them [letters of the
5 alphabet] at that age. One of the Dads gave me the [Letterland®] CD and it is a
6 great musical. (TL4:74.)

Excerpt 5 illustrates how Lily has marginalised teacher-directed practice, where it is relegated to occupying a compromised position (Fairclough, 2003). The compromised position of teacher-directed learning is distinguishable where Lily explains that she is ‘not pushing it [academic learning]’ (Line 3), yet acknowledges the benefits of children learning beginning phonics from the Letterland® instructional phonics CD. Lily’s reluctance to teach skills and concepts directly to children, as she does not want to appear to be ‘pushing’ academic learning (Line 3), is consistent with DAP, where ‘pushing’ children to learn is deemed a developmentally inappropriate practice (DIP); in particular, where children are put in situations where their ‘developmental capabilities’ are ‘exceeded’ (Bredekamp & Copple, 1997, p. 124). The influence of DAP as a dominant discourse can be seen through Lily’s reluctance to teach skills and concepts directly to children.

Lily’s interview accounts show that she was not adverse to teacher-directed practice and was open to the possibility of engaging in such practices. Teacher-directed practice was marginalised as Lily relegated the formal teaching of phonics to occupying a compromised position (Fairclough, 2003), noting that she does not ‘push’ academic learning onto children (Line 3). This view is consistent with DAP (Bredekamp & Copple, 1997; Copple & Bredekamp, 2009).

Teacher-directed practice silenced: Christiana

Teacher-directed practice is silenced in Christiana’s interview transcripts. For example, where one might expect to find evidence of teacher-directed practice, where an adult steps in to facilitate children’s learning, it is not
apparent. In Excerpt 6, Christiana describes a hypothetical teaching and learning situation, illustrating how she would avoid directly teaching children.

Excerpt 6.
1 Interviewer: So if you wanted to teach drawing skills, would you approach it a different way?
2 Christiana: Yes, I would do it as an experience in the room. Like doing more things
to do with fine motor stuff [development] … if there were children who were not good
at drawing, like not [being able to draw an object] … or [able to] hold[ing] pencils,
grasping and things like that. I would do activities to cater for that … Say, that they
were really that bad with it [drawing skills] you would set it [the environment] up as an
experience as they [children] come and go. But you would also kind of approach the
situation to get them to do it [learn how to draw, hold a pencil and grasp objects]
specifically. You know you have got something [a learning activity] set up, and Tim
and Tom who aren’t really good at it and you want, like … them to be good at
grasping … say cutting with scissors. You have things that they can cut out, but they
don’t want to do that, and you try things, and you know them and sometimes you think
that all they need is to start them off and encourage them, the verbal encouragement
and reassurance. You know, ‘that looks fantastic, you are nearly finished’.
16 Interviewer: So encouragement is okay in that case?
17 Christiana: Yes. (TC3:81.)

When asked how she would teach specific skills to children, such as drawing, Christiana replies that she would ‘do it as an experience in the room’ (Line 3, Excerpt 6), which means that she would set up activities for children to learn in their own time and space. There is a teacher expectation here that children will engage in the activity and learn through discovery. Endorsing DAP, Christiana said that children learn through the classroom environment which is set up in such a way that they learn on their own, with minimal adult guidance (Lines 3–14). If one endorses DAP, they would introduce curricula materials and learning after an individual child has demonstrated the ‘mental ability needed to master them [the curricula materials]’ (Elkind, 1989, p. 114), rather than before.

In the example above, Christiana’s reluctance to directly teach children skills and concepts, illustrated in Excerpt 6, is in line with the DAP approach that maintains that curriculum should be matched to the individual child’s emerging intellectual abilities, rather than teach specific skills to children, such as drawing. Christiana’s endorsement of the DAP discourse and the silences around teacher-directed learning in Excerpt 6 is recognisable through the subtle way she intended to persuade children to become involved in the activity she set up. The use of the phrase ‘you [the teacher] kind of approach the situation to get them [children] to do it specifically’ (inserted italics, Lines 8–10) indicates Christiana’s expectation that children will access the particular learning activity. There are silences in Excerpt 6, as there is no indication that children will be taught skills directly by Christiana, even when children were deemed to be ‘bad at drawing’ (Lines 4–8). Driven by concerns for the inappropriateness of ‘formal, academic instruction of young children’, the emphasis in DAP (Bredekamp & Copple, 1997, p. v) is for teachers to keep teacher-directed practices to a minimum.

Discussion and implications for practice
Teacher-directed practice has been shown to be legitimated, marginalised and silenced by teachers in the study. The excerpts here show teacher-directed practice legitimated by Ruth, marginalised by Lily and silenced by Christiana.

Illustrated in the examples above, where Lily and Christiana were reluctant to directly teach children skills and knowledge regardless of the learning opportunity presented, these episodes resonate with participant views in Leggett and Ford’s (2013) study where educators found it a challenge to articulate intentionality (p. 46) and were ‘grappling with the fine balance between teacher-directed and child-guided learning experiences’ (p. 48) (inserted italics). Moreover, Leggett and Ford (2013) argue that ‘historical notions of the role of the educator, with direct links from intentional teaching through developmentally appropriate practice to more postmodern conceptualisations, have created tensions in curriculum tied to pre-determined outcomes’ (p. 48). The findings from Leggett and Ford’s (2013) study where educators were ‘uncertain’ and ‘grappled’ with intentional teaching echo this study’s findings where teachers were reluctant to intervene and teach particular skills or content to children.
The findings presented above have implications for how intentional pedagogies are currently understood and enacted. Implications for practice are that the dominant discourse can and does influence teaching decision making and that potentially these discourses can narrow the range of teaching strategies that educators draw upon. Furthermore, this paper argues that, with an awareness of how dominant discourses can influence practice, along with an awareness of the wide spectrum of practices that comprise intentional pedagogies, educators and teachers might have more confidence to be able to articulate intentionality and provide a rationale about why they chose a particular teaching strategy.

Conclusion

Critical discourse analysis enabled a close analysis of influences on teacher decision making illustrating how the DAP discourse is legitimated, marginalised and silenced in certain curricula practices. The study found that DAP operated as the dominant discourse in the Victorian ECEC (preschool) context in 2004 and consequently was viewed as a common sense practice in early childhood curriculum and pedagogy, where it marginalised and silenced other discourses. In the 2013 context, Leggett and Ford’s study (p. 48) indicated that educators in the Australian context are also finding it challenging to articulate and enact intentional pedagogies and are ‘grappling’ with how to balance intentional teaching with child-initiated learning. This paper acknowledges that the dominance of the DAP discourse is one influence on early childhood curricula and teacher decision making and not necessarily the only discourse to exert influence on early childhood pedagogy and curriculum. The aim of looking back to look forward was to contribute insights and provide further understanding about why there might be reluctance to embrace intentional teaching in ECEC and to bring awareness about the range of practices that comprise intentional pedagogies.

Acknowledgments

Thank you to the participants in the study and to my PhD supervisors, Professor Sue Grieshaber and Professor Susan Danby for their support and critical insights throughout my study. Thank you to the anonymous reviewers for their constructive feedback and to The Warmambool Collective.

References


The role of the Educational Leader: Perceptions and expectations in a period of change

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AT A TIME OF RAPID pedagogical and policy change in the Australian early childhood educators’ professional context, little is known about the experience of the evolving Educational Leader role. This position is currently mandated in educational settings for young children, but at the time of writing, both the perceptions about the nature of the role and expectations of such a person, were unclear. This paper reports on a study across two geographical regions which contributes to the knowledge base of the unfolding of this role in the prior-to-school early childhood sector. Based on surveys from 206 people in the ACT and NSW in 2012, information collection was followed by a series of intensive workshops designed to facilitate understanding of the role and of the processes of educational change. Data from the survey and from these 41 workshop participants from diverse organisational and geographical settings enable greater insight to the issues, complexities and potential of this important role in the educational and policy landscape as well as the realities of workplace experiences of Educational Leaders. This paper has a focus on survey responses as affirmed through contributions by workshop participants; the actual enquiry projects undertaken by participants as part of the workshop initiatives are not included in the current paper. Despite contextual differences in responses, it is clear that expectations of the Educational Leader are high, appointment processes are constrained and role definition needs relevant local clarification.

Rationale

The Australian National Quality Standard (ACECQA, 2011) and other international studies (Siraj-Blatchford & Manni, 2007) identify the importance of educational leadership as a driver in improving the quality of educational programs and outcomes for children. This role was, in fact, enshrined in policy expectations in Australia in 2011 (Commonwealth of Australia, 2011). Interestingly, while much of the current Australian quality reform has focused on ways in which early and middle childhood programs can progress towards meeting and/or exceeding the approved standards, little time, research and professional learning has been invested in exploring the ways in which educational leadership can be maximised (Semann, Botero Lopez, Lawson & Bennett, 2014). As Desforges (2009) noted, ‘what is called for is a deeper consideration about the connectivity between research, policy and practice and between researchers and policy makers/practitioners’ (p. 4). In pursuing that goal, this study takes a sociocultural orientation which foregrounds the importance of exploring the perspectives of those affected by change. This reflects van Manen’s prioritising of ‘lived experience’ (1997) as well as acknowledgment of teachers as learners (e.g. Groundwater-Smith, Ewing & Le Cornu, 2007) and the centrality of practitioners’ voices in educational change (e.g. Fleer & Kennedy, 2006).

Introduction

The role of the Educational Leader is fundamental in assisting others to develop a sound curriculum and to assist children to achieve identifiable outcomes. The Education and Care Services National Regulations (Commonwealth of Australia, 2011) state that ‘provision is made to ensure a suitably qualified and experienced educator or co-ordinator leads the development of the curriculum and ensures the establishment of clear goals and expectations for teaching and learning’ (p. 335). Nevertheless, to date, much anecdotal evidence from the Australian early childhood sector has identified anxiety and confusion relating to the role of Educational Leader, the professional experience and technical knowledge required to be an Educational Leader, and the intersections between educational leadership and educational change initiatives.
An increasing research base across the early childhood sector in Australia has identified the critical role that leadership plays in delivering desired outcomes for both staff and children (Sims, Forrest, Semann & Slattery, 2014). Yet despite an ability for leaders to articulate these desired outcomes, a number of critical challenges remain which hinder sustainable organisational change. A survey constructed for this study enabled knowledge generation to assist in addressing those challenges.

Recently, building on a small Victorian study, Grarock & Morrissey (2013) asked ‘How can teacher educational leadership be supported and enacted in order to be most effective within a childcare context?’ (p. 11). To this end, this mixed-methods research project in the ACT and NSW presented a unique opportunity to inform current changes being undertaken across the early years’ sector, while simultaneously informing and supporting future change.

This research had two overarching purposes:

1. To understand evolving conceptions of early childhood educational leadership by:

   - identifying the decision-making processes involved in nomination of the Educational Leader
   - exploring the diverse ways in which educational leadership is understood and conceptualised across Australian Government Approved Child Care Services (AGACCS) in the Australian Capital Territory (ACT) and the state of New South Wales (NSW)
   - unpacking the expectations regarding the roles and responsibilities of Educational Leaders.

2. To investigate the potential of a leadership initiative incorporating practitioner enquiry as a facilitative tool to develop the role of the Educational Leader by providing support and professional learning to nominated Educational Leaders through a supported network.

This second purpose is explored in a subsequent publication.

Initially, an online survey for all educators in the targeted services was available for approximately three months at the beginning of the data collection period in each site—the ACT in the first half of 2013 and NSW in the second half of that same year (prior to the federal election; it is not clear if government and funding changes may have impacted on the sector’s perception of the role of the Educational Leader). Subsequently, individuals who completed the survey and who identified themselves as Educational Leaders could choose to participate in a focus group and six workshops in a (relatively) nearby area. Educators who were not nominated Educational Leaders were also invited to participate in a focus group to share their experience and expectations of the role. Ethics procedures were in place following National Health and Medical Research Council protocols. Participation in the survey was voluntary, not related to any work requirements/oversight, and in the form of Survey Monkey, so assent is seen to have been given for that study component. All workshop participants signed ethics consent forms agreeing to participate in the research component of the project as well as allowing future publications arising from the project. The forms were designed by the sponsoring organisation from standard university formats. That is, privacy was guaranteed, data storage was noted as secure, the right to withdraw without penalty was assured with no adverse implications for the workplace. These protocols also met the requirements of the funding body.

In this paper the role of Educational Leader is defined as an organisationally defined position, which is held by a person who has primary responsibility over teaching and learning, who can be referred to as ‘the EdL’. The existence of this mandated role does not exclude other educators from having a role in educational leadership; however, this research deals specifically with the role of the nominated EdL. For the purposes of this study, all other participants are referred to as ‘Non-EdL’s’; though this is not a positive or helpful term in the wider sphere, in this context it identifies respondents.

**Methodology**

A qualitative research approach is a situated activity that locates the observer in the world (Denzin & Lincoln, 2005) and often involves the use of a variety of methods to collect information, including focus groups, interviews and observations. Contrastingly, a quantitative approach is used to describe information that can be counted or expressed numerically; this data can be represented visually in graphs, histograms, tables and charts (Denzin & Lincoln, 2005). Both qualitative and quantitative methods were used in this study to gain a broad understanding of perspectives held by EdLs and Non-EdLs about pertinent issues, such as the experiences faced in fulfilling the role of Educational Leader.

Key strategies targeting the research aims described in this paper were as follows:

1. An online survey was employed to explore diverse ways in which educational leadership is understood and conceptualised across AGACCS in the ACT and NSW.

2. Survey respondents were invited to volunteer to participate in a series of six intensive workshops targeting the role of an EdL and the supporting of educational change through practitioner enquiry.

3. Two focus groups were held in each site, one with EdLs and one with self-selected Non-EdLs to extend on information in the survey; telephone interviews were also held with workshop participants to identify decision-making processes involved in nomination of the EdL and to unpack expectations regarding the responsibilities of EdLs.
4. As a leadership initiative, facilitated monthly meetings were held using a practitioner enquiry approach (Campbell & Groundwater-Smith, 2010; Edwards & Nuttall, 2009; Perry, Henderson & Meier, 2012) over a six-month period in each geographical location to provide support and professional learning to EdLs. Reports on these enquiry projects are included in a subsequent publication.

Detailed strategies are explained below.

**Phase 1: Online survey to all AGACCS in the ACT and NSW**

The research team developed an online survey to provide a scoping of issues related to educational leadership including critical issues the prior-to-school early childhood sector would desire an EdL to address, the skills required by an EdL, respondents’ experience of educational leadership, the critical change issues affecting the sector and perspectives on how the role of an EdL can be maximised. Sixty surveys were completed in the ACT and 146 in NSW, with a total response of 206 people. This represents approximately 18.9% of possible respondents in this funding set in the ACT and 3.6% of possible respondents in NSW. With these figures, there is the tabling of situated perspectives rather than the claim of generalisability.

**Phase 2: Interviews with EdLs**

The EdL participants across three workshop groups reflected a range of ages, service types, qualifications and organisational structures as described below. Major gaps were the lack of male workshop participants and the presence of only a minority of participants for whom English was a second/other language. Following the explanation and acceptance of standard ethical protocols, focus questions were asked of the participating EdLs as follows:

- What has been your experience in this role thus far?
- What expectations do you have of this role?
- What expectations do others have of this role?
- What support is required to allow you to succeed?
- How did you come to be selected for this role?
- What are the challenges experienced in the Educational Leader role?
- What opportunities or critical issues have you encountered and do you wish to address these in the role of Educational Leader? If so, what kind of action do you think might be required?

**Phase 3: Focus groups with EdLs and Non-EdLs**

Two focus groups were held in each geographical region, one with EdLs and one with those who wished to contribute but did not identify themselves as the EdL.

This phase of the research illuminated a range of both common and individual issues faced by those interviewed, thereby creating a space for further reflection, debate and discussion. The Non-EdLs were not involved in the subsequent workshop series.

**Phase 4: Six monthly meetings with EdLs**

Taking a practitioner enquiry approach shaped around individually chosen enquiry questions, the participating EdLs were involved in monthly professional learning processes aimed at skill development and knowledge enhancement. Each volunteer was required to undertake a self-chosen practitioner enquiry project in order to investigate an element of professional practice. The focus of the projects related to participants’ roles as EdLs and their attempts to facilitate educational change. Participants were assisted over the six-month period to gain useful information in their respective projects while also developing skills to fulfill the role of Educational Leader. This work was concluded with an evaluation component.

**Survey participant profiles**

As the survey participants are the key informants for this paper, detailed demographic information will enable readers to contextualise the responses as follows. The samples are not large enough to suggest causality, only to inform the reader and flag interesting relationships across localities.

**Demographic information**

Respondents were asked to provide information about their gender, age, country of birth, ethnic background and language spoken at home. A comparison of this data revealed similarities for participants in the ACT and NSW. Approximately 96% of informants were female and 4.2% were male. In both areas, respondents were aged between 21 and 66 years, with an average age of 40 years in the ACT and 42 in NSW.

In the ACT, 85% of participants were born in Australia and 66% of participants described their ethnic background as Australian. This compares with NSW, where 76% of participants were born in Australia and 72% described their ethnic background as Australian. English was the main language spoken at home for all participants in the ACT and for 98% of participants in NSW.

**Participant qualifications**

There was substantial variation between the ACT and NSW in terms of the highest educational qualification attained. In the ACT, the most frequent response to this question was Diploma or Associate Diploma (37.5%) compared to a state average of 42.4% of primary contact staff having attained this level of qualification (Australian Government Productivity Commission, 2011). This was followed by a Bachelor Degree (29.2%) which is significantly different to the state average of 16.9%.
The reverse was true in NSW, with 54.2% of respondents holding a Bachelor Degree (whereas state average was 21.7%), followed by Diploma or Associate Diploma (18.3%), which, compared against the state average of 39.1%, highlights a significant variation. This trend was reflected in postgraduate qualifications. In the ACT, 4.2% of participants held a postgraduate qualification, compared with 20% in NSW. The higher level of qualification in NSW may reflect differing socio-political contexts, including requirements for employment and the state-based regulations.

In the ACT, more respondents were completing further studies (58.3%), compared with 35% in NSW. Of these, in the ACT, 16.7% of respondents were completing a Bachelor Degree and 16.7% were completing a Diploma or Associate Diploma. In NSW, 8.3% of participants were completing a Bachelor Degree. In addition, 4.2% of participants in the ACT were completing postgraduate studies, compared with 11.6% in NSW.

Services represented

Due to the funding parameters associated with the research, the majority of participants in both the ACT and NSW (77.2%) worked in long day care, 15% worked in family day care, and 7% in outside school hours care (including vacation care). More participants in NSW worked in long day care (83.3%) compared with family day care (13.2%) and outside school hours care (3.5%). A slightly different distribution was present in the ACT, where 65% of respondents worked in long day care, 18.3% worked with family day care and 16.7% worked in outside school hours care.

Overall, most participants in NSW and the ACT worked in community-owned-and-managed programs (63%) compared to privately owned programs (36%). However, more participants in the ACT worked in community-owned-and-managed programs (83.3%) compared to NSW participants (55.6%). Therefore, more participants in NSW worked in a private program (44.4%) compared to ACT participants (16.7%).

The main type of community-owned-and-managed service in which participants worked was large ‘umbrella organisations’ (ACT: 54.2%; NSW: 41.8%), followed by ‘stand-alone centres’ in both the ACT (25%) and NSW (31.6%). In NSW, a further 12.7% of respondents worked in a University- or TAFE-sponsored centre and 11.4% in a local government-managed centre. In the ACT, no respondents worked in a University- or TAFE-sponsored centre while 5.9% of respondents worked in a government-sponsored centre.

In NSW, the main type of private program in which respondents worked were stand-alone centres (33.3%) and centres that are part of a chain or corporation of five or more centres (23.1%). In the ACT, the main type of private program in which respondents worked were stand-alone centres (33.3%) and centres that are part of a chain or corporation of five or more centres (33.3%).
Findings

Educational Leader selection/appointment

Respondents were asked to nominate which of a range of factors were taken into account in selecting the EdL at their service. There was agreement regarding factors they saw as either essential or a major factor in selecting the EdL as detailed in Table 1.

In both areas, experience and capacity were seen as somewhat more important than either qualifications or interest in the role. It is worth noting that one factor that was not seen as relevant was the ‘limited choice of personnel for the role’; 39% of NSW respondents rated this as not at all a factor, as did 33% of ACT respondents. All seemed confident that someone in each service was capable of holding this position.

Approximately 90% of respondents believed that an EdL requires a minimum qualification. In explaining the nature of that qualification, the most frequent response in the ACT was Diploma or Associate Diploma (47.1%), followed by a Bachelor Degree (21.6%). This contrasted with the responses from NSW, where the most frequent response was a Bachelor Degree (44.6%), followed by a Diploma or Associate Diploma (36.2%). These perceptions were likely to have been affected by the nature of qualifications held by the respondents themselves.

Perspectives about the role of the Educational Leader

Respondents were asked to respond to a number of statements about the essential roles and responsibilities of the EdL. More than half of the respondents in the ACT and NSW nominated certain roles as being essential in the EdL position, as detailed in Table 2.

The greatest regional differences in perception related to the first and last of the roles listed, with NSW respondents putting greater emphasis on supporting educators to improve their approaches to teaching children and developing a range of skills in working with children. Perceptions of the importance of other roles were similar in the two constituencies.
Respondents also noted other roles they believed the EdL should attend to. Respondents from both the ACT and NSW included the roles listed below (in no particular order):

- participate in a leadership team
- mentor and train staff
- implement professional development
- engage in best practice
- be a role model
- develop a learning culture
- inspire and motivate staff
- demonstrate sound knowledge of National Quality Framework (NQF) and National Quality Standard (NQS)
- assist staff with research
- develop partnerships with community members
- maintain and model expectations
- support quality documentation.

In addition, NSW respondents added other roles not mentioned by ACT participants, as follows:

- find resources for staff support
- ensure policy and practice is current
- communicate with staff/management about sector and centre developments
- advocate for the rights of the child and the early childhood sector
- build effective relationships with children, families and staff
- develop a learning and questioning culture
- provide updates and insights to the team from research
- develop curriculum and evaluation
- develop professional networks
- communicate with and educate families (i.e. importance of early years/child development/curriculum)
- conduct staff appraisals
- demonstrate and encourage reflective practice
- assist staff to manage change
- utilise the strengths of the team
- encourage and support educators.

Possibly the larger number of more highly qualified respondents in NSW contributed to these perceptions of additional roles, or simply the provision of a larger number of responses from NSW.

In contrast, the actual key tasks currently being undertaken by EdLs as reported by NSW and ACT respondents are listed in Table 3 on page 33.

This data indicates that over 86% of respondents perceived that the EdLs in their services were supporting educators to understand the NQS and in their educational documentation, while over 89% were supporting educators to improve their approaches to teaching children and to implement approved learning frameworks. As this largely represents self-assessment, there is a possibility that this is a hopeful rather than an actual assessment.

It is interesting to note the variation between the perception and actualisation of the role. This may account for the confusion around the role thus decreasing its overall impact.

**Role efficacy**

Approximately 58% of all respondents stated that there was not a specific job description for the role of EdL within their service. In addition, the majority of respondents (84.8% in the ACT and 88% in NSW) reported that they did not have a budget to assist them to carry out the role, nor was there supplementary pay for taking on the role of the Educational Leader (78.8% in the ACT and 86% in NSW). Of the NSW respondents who did have an annual budget, the dollar amount allocated to the role varied. Estimates ranged from $270 to $5000. Some people spoke of having a flexible budget in response to need. Of the NSW respondents who received supplementary pay, responses ranged from a $65 allowance to a $2000 annual payment. Some respondents reported receiving above-award salaries; others spoke of having time allocated to the role. Approximately 15% of ACT respondents reported having a budget. The specific nature of this budget was not described. There was some implication that financial inequities had the potential for becoming an industrial issue.

**Perception of self as change agent**

Respondents were asked to comment on the extent to which they could be a change agent in their current setting, and more broadly, across the sector. Most respondents in the ACT (92.2%) and NSW (97.7%) saw themselves as a change agent in their current settings (at least occasionally), although ‘often’ was the most common response. The degree to which respondents saw themselves as able to be change agents in their current setting was similar in both the ACT and NSW, although NSW respondents were more confident about this perception, perhaps due to their higher qualifications. Note that 83.8% of NSW respondents generally saw themselves as able to be change agents in their current setting while 72.5% of ACT participants had the same perception (as shown in Table 4).

<table>
<thead>
<tr>
<th>Extent to which you can be a change agent in your current setting</th>
<th>ACT</th>
<th>NSW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally</td>
<td>19.6%</td>
<td>13.8%</td>
</tr>
<tr>
<td>Often</td>
<td>43.1%</td>
<td>39.2%</td>
</tr>
<tr>
<td>Consistently</td>
<td>29.4%</td>
<td>44.6%</td>
</tr>
</tbody>
</table>
Critical issues affecting the sector

Respondents were asked to nominate what they considered to be critical issues impacting on the sector. Perceptions varied, but included several strong themes related to challenges with infrastructure and professionalism as well as awareness of gaps in cultural competence and inclusion of Aboriginal perspectives, children and families.

Concern was expressed over staff understanding and implementation of the NQS, including the Early Years Learning Framework (EYLF), with comments such as ‘the sheer volume of standards and what has to be done to meet them is a lot to take on board’ and anxiety about ‘time to get our heads around the new changes and still manage to complete our normal duties’, including the provision of high-quality care and education. Concerns with time were commonly expressed both in general (‘too much change in a short time frame, resulting in a lot of insecurity within job roles’) and the specific (‘more in-depth documentation required with little time to program each week’). This view was summarised by one person who wrote: ‘balancing what needs to be documented with the needs of the children without it coming at a cost to educators themselves’ and another commented on ‘bringing everyone on board with what they need to know at once without overloading them’. This was particularly difficult for directors who were also trying to manage the role of EdL:

Being able to meet all requirements and engage in face-to-face teaching of children in LDC is difficult in an 8-hour day. As a teaching director, finding time to effectively manage, support and educate others in the service on the EYLF; NQS and theory is extremely difficult. Pay and conditions do not attract or retain the qualified people or those suited to the job at all.

Infrastructure concerns related to ‘poor funding models’ and ‘wage justice’ as well as lack of ‘free training’ and ‘financial incentives’. As implied above, these concerns spilled over into major issues about attracting and retaining appropriate staff—defined not only in terms of qualifications, but with regard to communication skills, passion and commitment to the sector. Mention was made of difficulties with ‘fast-tracked training’, often accompanied by concern about Certificate III programs based on Recognition of Prior Learning that were disadvantaging individuals and the sector through inadequate preparation for expected roles. Related concerns included ‘higher expectations for reporting and assessment; educators require much higher levels of written communication skills’ and ‘time and support to upgrade qualifications while still working and earning to support the family’.

Inequities in out of school hours care and family day care were highlighted by educators working in those sectors. For example, one person wrote: ‘In FDC all Child Development Officers are Educational Leaders as they all support and lead their case load of Educators; there should not be one Educational Leader in FDC—it just doesn’t work!’.

Discussion

Respondents

A total of 206 people took part in the online survey, of which 71% were from NSW and 29% from the ACT. The demographic profile in both ACT and NSW was similar for gender, age and cultural and linguistic diversity. In both cohorts, the majority of respondents were female, with an age range of approximately 21–64 years and an approximate average age of 41 years. Most participants in both cohorts were born in Australia, described their ethnic background as Australian and spoke English at home. The lack of respondents who spoke languages other than English in the home highlights the need for further research of this type with EdLs for whom English is not the preferred home language. Similarly, the lack of male participants highlights another gap in the knowledge base.

These respondents reflected a somewhat more qualified workforce than in the larger early childhood professional community. More respondents in NSW (54%) had a Bachelor Degree as their highest educational qualification, compared with those in the ACT (29.2%), where more people listed a Diploma or Associate Diploma as their highest qualification (37.5%). In addition, more respondents in the ACT were completing further studies compared with participants in NSW, which is logical, given the research-informed national expectation of university-qualified teachers in the sector. Holding different qualifications generally related to the valuing of particular qualifications according to state/territory expectations, and gives strength to the impression that responses were personally relevant rather than simply provided as potentially expected by the researchers. In addition, while all perceived their responsibilities to implement approved learning frameworks, even greater value was given to supporting educators to improve their approaches to teaching children.

Most respondents worked in a long day care program. More people in the ACT worked in a community-owned-and-managed program while more in NSW worked in private programs. The main type of community-owned-and-managed centre in which respondents worked was ‘large umbrella organisations’. The main type of private program in which respondents worked were ‘stand-alone centres’.

At least half of the respondents were directors. In addition, respondents in both cohorts described themselves as the program manager/nominated supervisor/Educational...
Leader. It is unclear if confusion over nomenclature influenced use of these terms. More respondents in NSW (75%) were the nominated EdL in their current position, compared with those in the ACT (47.1%). Most people in both cohorts were appointed to this position by management. Even though this role is a relatively new regulatory requirement, approximately one-quarter of respondents reported holding this position in previous employment, perhaps implying a self-perception of acting in this role, with or without the ascribed label.

All respondents agreed with the key factors identified in selecting the EdL, including nature of qualifications held by the individual, their experience and capacity, and their interest in the role. Over 90% of all respondents believed that the Educational Leader role requires a minimum qualification. The level of qualification proposed as “minimum” reflected the highest educational qualification held by participants, with more people in the ACT proposing a Diploma or Associate Diploma and most people in NSW proposing a Bachelor Degree. Again, this implies the establishment of perspective in relation to personal positioning.

There was agreement across the cohorts regarding the essential roles of the EdL position. Additional roles respondents agreed the EdL should attend to included being a mentor, role model, support person, trainer, community link and advocate. Perceptions of the meanings assigned to these terms becomes clearer in the comments by respondents themselves. More than half of the respondents in the ACT and NSW stated there was not a specific job description for the role of Educational Leader. In addition, the majority of people in both cohorts reported that they did not have a budget to assist them to carry out the role, nor was there supplementary pay for those taking on the role.

Most respondents in the ACT (92.2%) and NSW (97.7%) saw themselves as change agents in their current settings, at least to some degree. In the ACT, more respondents saw themselves as change agents “often”, whereas in NSW, more saw themselves as change agents “consistently” (in their own settings). Just under half of all respondents described themselves as change agents “occasionally” across the sector.

Respondents identified a number of critical issues affecting the sector, particularly key issues related to the implementation of the NQF, including budgetary implications. These issues included the impact of requirements regarding staff qualifications and child/staff ratios; communicating key issues to educators and families; and understanding the role of the EdL. Other critical factors noted by NSW respondents were cultural competence, time management and rural issues. Other critical factors noted by ACT respondents were curriculum and documentation. Common concerns included anxiety about effective ways to assist educators with programing and record-keeping, while avoiding commercial solutions (i.e. buying packaged programs or recording systems) which might not reflect local contexts.

Educators in all federally funded prior-to-school early childhood settings and those working in outside school hours programs across the ACT and NSW were invited to participate in this project. Data indicated that the role of EdL is complex and may not sit comfortably as an “add-on” to the director’s role. It is also important to note that the role is relatively new and individuals and organisations are growing into effective ways of enacting site-specific educational leadership.

The study overall reflects the transient and pressured nature of the sector. Half of the people who completed the survey and also volunteered for the workshops had either moved or had not been able to attend the workshops after a three-month time lapse which included the December summer period.

Another key factor was the culture of each centre/workplace, including the presence of openness to change, valuing of working relationships and educators participating in further study. These elements seem to be associated with willingness to welcome and work with an EdL. Implementation of the role seems to be perceived as more successful when the EdL values “reflective practice”—as one person commented: “you need to be questioning”. This observation relates also to the appointment or selection of the EdL. Anecdotal evidence suggests that some services are too small or isolated to have any choice in the identification of the most experienced or appropriate person for the role and can only hope that the person has acquired pedagogical leadership skills through their previous history, family or community work. In other cases there are worrying reports of the appointment of the most junior member of staff so s/he can ‘learn’ more about the profession by enacting this (difficult) role; this solution is unlikely to be successful for either the individual or the service.

**Conclusion**

The study presented a unique opportunity to inform the current changes being undertaken across the education and care sector, whilst simultaneously informing and supporting future changes. It has reinforced the fact that the roles of EdL and activity of educational leadership are not synonymous, but cannot be considered independently from each other. They are interdependent. It does, however, highlight the importance of using language appropriately, to distinguish between people who hold the nominated (labelled) position of EdL, and the educational leadership which should be demonstrated by EdLs but may also be demonstrated by many others in the workplace.
This study affirmed Grarock and Morrissey’s claim that ‘Workplace cultures can also impact on leadership enactment’ (2013, p. 5). Assisting those in positions of responsibility to develop supportive workplace contexts that nurture all involved, while embracing change, continues to be a priority. It is clear that care is needed in the selection and support of EdLs. While the lack of specific role definitions may give local sites valuable autonomy, general frameworks would assist less experienced managers in developing appropriate local guidelines.

It would seem reasonable to have a negotiated clarification of roles and responsibilities to enable both the person in the role and others in the setting to have shared expectations. While the lack of role definitions for 42% of EdLs was problematic, the lack of an associated budget was a clear indication of complexities of this evolving role. Any such role definitions, however, need to be adaptable to local contexts and situational pragmatics. There may also be an implication that this important role deserves industrial recognition and professional learning opportunities specific to it.

Regional and employer differences will continue to impact on site variation in defining educational leadership. The professional benefits and ‘quality gains’ reported in this study provide evidence that may yet inform policy and site-based decision making. Whether adequate support will be available to enable the flourishing of the EdL role is not yet clear. Further investigations would continue to enrich this knowledge base.

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References


Infants of the productivity agenda: Learning from birth or waiting to learn?

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THE AUSTRALIAN EARLY CHILDHOOD Reform Agenda, initiated in 2008 by the then Labor government, heralded a commitment to a focus on child outcomes in early childhood education and care policy in order to give Australia’s children the ‘best start in life’. A number of workforce policy initiatives aimed at achieving this ambition were announced, prioritising improvements in child-to-staff ratios and the qualifications of educators working with young children. More recently, the draft report of the Australian Productivity Commission Inquiry into child care and early learning has challenged these workforce reforms by reviving historic divisions between education and care and differentiating the learning needs of children over three from those under three. Claiming evidence that infants’ participation in early childhood education contributes to any long-term benefit is inconclusive, the Productivity Commission called for a substantial lowering of qualifications requirements for educators working with children under three years. A juxtaposition of the reform agenda and the Commission’s recommendations reveals a disjuncture in understandings of infants and consequently the type of workforce needed to support their wellbeing and learning. While contemporary Australian early childhood policy promotes images of infants as learners from birth, the Productivity Commission draft report portrays them as waiting to learn. In examining the pendulum of shifting ideas about infants, we highlight the vulnerability of infants in early childhood policy, especially in relation to the shaping of the workforce responsible for them.

Introduction

The participation of infants in early childhood education and care (ECEC) settings has long been conceptualised according to the childcare needs associated with mothers’ paid workforce participation. Surrounded by discourses of concern for very young children in non-familial care arrangements, this conceptualisation reinforced the notion of care—characterised by attention to physical safety and emotional attachment (Page, Clare & Nutbrown, 2013; Rockel, 2009; Trevarthen, 2011). The introduction of Australia’s National Quality Framework (NQF) heralded a shift to a more contemporary image of infants. Expanding on notions of infants’ care needs, there has been an increasing recognition of infants as competent, powerful learners (Expert Advisory Panel on Early Childhood Education and Care, 2009). The release of the Childcare and early childhood learning Draft Report of the Australian Government’s Productivity Commission (Productivity Commission, 2014) in July 2014, however, signalled the tenuous nature of images of infants as strong and capable learners, suggesting a possible return to images of infants as in need of little more than custodial care.

This article juxtaposes conceptualisations of infants reflected in current Australian early childhood policy against recommendations put forward in the Childcare and early childhood learning Draft Report (Productivity Commission, 2014). Focusing in particular on the nexus between images of infants and the flow-on to workforce policy recommendations for children under 36 months, we highlight disjunctions between images of infants reflected in current early childhood policy against the draft workforce recommendations flagged by the Productivity Commission. We begin with a brief discussion of ways that infants have historically been reflected in the Australian early childhood
Images of infants

According to James and James (2004), images of children reflected in early childhood policy represent a complex interplay between cultural norms, social aspirations and political ideology. Historically, a combination of opinion, commentary and research were responsible for influencing images of children. In particular, images of infants reflected in early childhood policy can be seen to be imagined and re-imagined to fit with changing expectations and political imperatives. Creating somewhat of a pendulum of policy logic, these shifting images of infants in turn shape and re-shape expectations for their early childhood experience. Australian early childhood policy has long reflected images of infants as physically and emotionally vulnerable and, as a consequence, at some risk in non-familial childcare arrangements (Ailwood, 1998). Throughout history, child care has been entrenched in discourses of maternalism (Ailwood, 2007; Bown, Sumsion & Press, 2010), emphasising notions of care as the priority for young children. These discourses are particularly pronounced with respect to infant care. With the infant program traditionally overseen by the health nurse (often referred to as Nurse in Charge), there has historically been little to no attention given to educational aims or learning outcomes of infants in the childcare context (Huntsman, 2005; Page et al., 2013). In essence, the infant has been depicted as the naturally growing and developing child, primarily in need of protection from physical danger and emotional harm—cared for while ‘waiting to learn’.

While socially and culturally constructed images of infants can influence and shape policy, James and James (2004) note that these images can also be effectively re-shaped to suit a particular stance or political ideology. More recently, growing recognition of the importance of the early years has re-positioned infants beyond notions of ‘waiting to learn’ to that of ‘learners from birth’. Largely responding to widespread acceptance of neuroscience—recognising the plasticity of the brain of the newborn, along with a growing body of evidence linking educational outcomes with a nation’s productivity—the infant is now seen as a being full of potential that can be shaped by experience (Shonkoff & Phillips, 2000). This reframing of images of infants, from those requiring custodial care while their mothers participated in the paid workforce to those of learners from birth, can be evidenced in part by enhanced expectations for their childcare experience. Beyond notions of purely care, the NQF reflects an expanded pedagogical responsibility for infants, framed by explicit learning and development outcomes. Reflecting this contemporary view of the importance of the early years in laying the foundations for future health, development, learning and wellbeing (COAG, 2009), infants were included in the general definition of children in both the NQF and the Early Years Learning Framework (EYLF) (DEEWR, 2009). This inclusion signalled a growing commitment to not only address infants’ needs for care and safety but to also recognise their learning potentials and rights to education.

A workforce for learners from birth

Following many years of ambivalence and relatively weak regulatory requirements for educators working with infants, the NQF acknowledged a more complex image of infants and consequently the need for a more skilled and professional workforce. According to the Standing Council on School Education and Early Childhood (SCSEEC) (2012), ‘[t]here is increasing recognition that the work of caring for and educating young children is complex and requires enhanced qualifications and ongoing professional development’ (p. 4). Drawing on evidence from a range of international reports (see OECD, 2001, 2006, 2012) and research studies (see NICHD Early Child Care Research Network, 2002; Sylva, Melhuish, Sammons, Siraj-Blatchford & Taggart, 2004), the Council of Australian Governments (COAG) declared that the ‘quality of the workforce is a key factor in achieving good outcomes for children’ (COAG, 2009, p. 8). Acknowledging the increasing
complexity of the work of early childhood educators, along with aspirations for stronger learning and development outcomes, a range of workforce reforms were initiated.

Perhaps the most overt evidence of an increased policy commitment to infants can be seen in the changes to infant-to-educator ratios that were among the first of the reforms to be enacted following the 2009 launch of Australia’s NQF. The commitment to improve the infant–educator ratio was perhaps a key acknowledgement by government that the increasing phenomenon of infant child care and the importance of experience in the lives of infants deserved specific and immediate attention. Now embedded in national legislation, the 4:1 ratio for infants to educators is one of the few reforms where a truly nationally consistent agreement across all jurisdictions has been achieved.

Further to this change in infant-to-educator ratios, a raft of workforce initiatives were announced, broadly designed to promote nationally consistent standards and increased professionalism of the sector. Five key strategies frame the workforce reforms announced in 2012. These include:

- an increase in the size and retention of the early childhood workforce
- improvement to the capacity of the workforce to be responsive to the sector
- improvements to the qualifications requirements for educators
- increased professionalism and accountability for educators to demonstrate educational outcomes for all children
- enhanced capability of the workforce to work collaboratively across child health, education and welfare professional disciplines (SCSEEC, 2012).

Of particular significance for infants were commitments to improvement to the qualifications requirements for educators, along with increased professionalism and accountability for educators to demonstrate educational outcomes for all children. The inclusion of infants in these broad workforce reforms was a strong statement of commitment to invest in infants’ learning as well as their wellbeing. Moving on from images of simply requiring care, the reforms reflected the rights and entitlements of infants to specialist educators with ‘… deep knowledge of child development and the ability to form caring, trusting relationships’ (Expert Advisory Panel on Early Childhood Education and Care, 2009, p. 3). Such statements within the reform agenda demonstrate a shift in the way infants were imagined in the NQF and the consequent re-shaping of policy to suit this emerging image of infants as learners from birth. The introduction of a mandated minimum qualification of Certificate III for all educators, a commitment to a requirement that 50 per cent of educators hold a Diploma-level qualification or above, along with the requirement to employ a university-qualified teacher in all early childhood settings from 2014, was a significant improvement for infants in most jurisdictions. Infants appeared to make considerable gains in relation to the qualifications of educators. Prior to the reforms they were perhaps the group most likely to have a majority of minimally qualified or unqualified educators working directly with them (Rockel, 2009). An enhanced workforce with specialist knowledge and skills in early childhood education was considered essential to the aspiration of improved child outcomes.

**A framework for learners from birth**

Further acknowledgement of infants as learners from birth was evidenced in their inclusion in the EYLF. Heralding a strong commitment to ensuring that the experience of all children in early childhood programs would result in positive learning outcomes, the EYLF was developed to ensure that all children participating in early childhood education experienced quality teaching and learning. Described as assisting educators ‘… to provide young children with opportunities to maximise their potential and develop foundations for future success in learning’ (DEEWR, 2009, p. 5), the EYLF emphasises the importance of extending and enriching all children’s learning. The need for educators with specialist knowledge and skills was reflected in the expectations for planning and assessing infants’ learning and development against five broad learning outcomes. The decision to mandate for at least half of the educators to hold a Diploma-level qualification or higher reflected these higher expectations and suggested the importance of pedagogical leadership. More highly qualified educators would lead educator teams in using the EYLF as a curriculum guide and the increased professionalism and accountability required under the NQF.

As the recent *Starting well* report (Watson, 2012) notes:

> A country’s [approach to curriculum] is guided to some degree by the quality and training of its workforce. Those with highly educated teachers have far less need for a more detailed curriculum, but can simply set the overall principles and expectations … By contrast, those with a weaker workforce would likely benefit from closer guidance, especially in the form of prescriptive lesson plans (p. 28).

Described as a ‘hybrid-like’ curriculum (Sumson et al., 2009), the EYLF is essentially a framework, requiring substantial knowledge of early childhood learning and development as the foundation for translating the broad principles, practice and learning outcomes into meaningful and relevant learning experiences. It includes some elements of detail but leaves space for adaptation and interpreted possibilities to enable responsiveness to cultural, contextual and individual differences. Authors of the EYLF acknowledge that the diverse workforce of the Australian early childhood sector was a consideration in
determining the level of detail and the complexity of the language used. They have stressed the intent that more highly qualified educators would take leadership to guide discussion and debate and ensure a robust interpretation and use of the document (Sumsion et al., 2009).

The necessity for a knowledgeable and skilled workforce is further evidenced in examining the underpinning intent and contribution of the EYLF to the broad goals for child outcomes. Premised on an obligation to the United Nations *Convention on the rights of the child*, the EYLF is underpinned by the principle ‘that all children have the right to an education that lays the foundation for the rest of their lives, maximises their ability, and respects their family, culture and other identities and languages’ (DEEWR, 2009, p. 5). These ambitious expectations require educators to not only use considerable knowledge of children, their learning and development but also skills in working with families from a range of cultural and social backgrounds. Educators are required to be responsive to a range of children’s interests, abilities and ways of knowing and learning. They are asked to ‘engage children actively in learning, … identify children’s strengths and interests, choose appropriate teaching strategies and design the learning environment’ (DEEWR, 2009, p. 9). They are also asked to draw on a range of perspectives and theories to challenge traditional ways of seeing children, teaching and learning, and encourage educators, as individuals and with colleagues, to:

- investigate why they act in the ways that they do
- discuss and debate theories to identify strengths and limitations
- recognise how the theories and beliefs that they use to make sense of their work enable but also limit their actions and thoughts
- consider the consequences of their actions for children’s experiences
- find new ways of working fairly and justly (DEEWR, 2009, p. 11).

Suggesting relatively high order knowledges and skills, these are ambitious expectations of a workforce that holds variable levels of qualifications in early childhood learning and development. As Elliott (2006, p. 29) states:

… at the heart of appropriate pedagogies is the ability of practitioners to structure environments that promote optimum engagement for children. Key elements of this pedagogy are the richness and appropriateness of staff interactions with children and their scaffolding strategies, especially guiding, modelling and questioning. Other key factors linked to children’s developmental outcomes are staff knowledge of children’s development and learning needs, and their knowledge and understanding of curriculum.

The reform’s ambitions for child outcomes are reflective of the need for a highly educated workforce that has the capacity to interpret curricular expectations to suit local and cultural contexts, to not only base their work on theories of learning and development but to debate, critique and reflect on their practice (DEEWR, 2009). The need for strong leadership to support this work is reflected in a range of international and national research findings suggesting that this type of professional behaviour is more likely to occur where highly qualified educators are present. As Siraj-Blatchford, Sylva, Muttock, Gilden and Bell (2002) found, the presence of more highly qualified staff has a positive influence on the behaviour of other staff. Fenech, Harrison, Press and Sumsion (2010) found that a core group of university-qualified teachers is more likely to create a learning community and facilitate higher quality pedagogic practices which in turn enhance curriculum and outcomes for children. Recognising the variously qualified workforce in the Australian context, the need for a mix of qualified educators, including some with higher qualifications to act as pedagogical leaders, was fundamental to the aspiration of the EYLF (Sumsion et al., 2009). This policy commitment reflected a strong image of infants along with older children as learners, entitled to a suitably qualified workforce.

**Flagging a return to infants waiting to learn**

In stark contrast to this image of infants as learners from birth, along with ambitious expectations of those who work with them, the 2014 Draft Report of the Australian Productivity Commission Inquiry into child care and early learning (Productivity Commission, 2014) reinvigorated images of fragile and needy infants. The Draft Report reintroduced notions of child care as ‘detrimental’ (p. 5) and having ‘potential for negative effects’ (p. 13), along with a suggestion that child care for infants ‘… should focus on quality care and not be required to include a significant educational component’ (p. 277). Distanced from the active language of the NOF to support both ‘care and education’ (COAG, 2009, p. 10), the Productivity Commission Draft Report favoured the more passive terms of ‘growth, learning, welfare and development’ (p. v). These terms reinforced images of the naturally growing and developing child who, in most cases according to the Commission, ‘will likely continue to do so even without participation in formal ECEC at a very young age’ (p. 13).

Attention to the learning benefits and wellbeing of infants participating in early childhood education and care were negated in the Draft Report with a return to an emphasis on the childcare system and in particular ‘affordability, flexibility and access’ (Productivity Commission, 2014, p. v) for parents. Prioritising parents’ workforce participation, Assistant Minister Ley’s comments promoting the Productivity Commission inquiry demonstrated her influence and bias toward the economics and convenience of the system to meet family workforce pressures.
A workforce for infants waiting to learn

The assumptions underpinning the draft Productivity Commission’s view that infants will ‘likely (our emphasis) grow and develop naturally’ then frames their recommendation for a minimally credentialled workforce who will adequately respond to infants’ naturally occurring learning and development. Recommendation 7.2, that ‘all educators working with children aged birth to 36 months are only required to hold at least a certificate III, or equivalent’, along with the recommendation that ‘the number of children for which an early childhood teacher must be employed is assessed on the basis of the number of children in a service aged over 36 months’ (Productivity Commission, 2014, p. 58) presented as a

powerful contradiction to contemporary images of infants as learners reflected in the NQF. Revitalising the often contested education and care divide and recommending a substantially less qualified practitioner for children under 36 months, the Productivity Commission used a re-imagined infant as justification to substantially differentiate their learning needs from that of older children. Framed in this way, the Commission’s defence for a minimally qualified workforce was based on the claim that ‘... little compelling evidence that requiring a proportion of those caring for children aged birth to 36 months to hold certain higher level education qualifications is necessary’ (p. 58). Constructing infants’ learning as largely unnecessary conveniently removes any imperative to engage a more highly qualified workforce.

Claiming that a reduction in qualifications requirements for educators working with children under 36 months could be lowered ‘without compromising quality’ (Productivity Commission, 2014, p. 35) raises questions about understandings of the relationship between notions of quality and the workforce. Such a claim appeared to overlook the growing body of evidence demonstrating that higher qualified staff engage in more positive caregiver interactions (Manlove, Vázquez & Vernon-Feagans, 2008) and demonstrate more complex levels of reasoning about infant development and behaviours (Degotardi, 2010). There was an implicit assumption that the Certificate III credential alone could fulfil the roles and responsibilities that the current more highly qualified workforce undertakes. This claim demands a critical examination of the Certificate III credential and its capacity to equip educators to contribute to all dimensions of infants’ childcare experience without compromising quality.

Is Certificate III sufficient?

Closer scrutiny of Certificate III suggests it does not equip educators to take full responsibility for the overall wellbeing of young children, nor does it enable them to deliver the enhanced learning outcomes expected under the current higher qualifications requirements. The Australian Qualifications Framework (AQF) describes Certificate III as enabling ‘limited responsibility in known and stable contexts within established parameters’ (AQF, 2013, p. 32). Working with very young children cannot be considered a stable context. On the contrary, it is an inherently unpredictable and unstable working environment for educators, given that infants demonstrate considerable individual differences, respond at times unpredictably and cannot clearly articulate their needs and desires. With no pre-requisite entry requirement, Certificate III is designed for those with limited work experience and in many cases for those with relatively low levels of high school achievement. It emphasises foundational skills for those taking on a supporting role to work with more highly qualified educators.
The units of study within the Certificate III program cover children in the age range birth to five years and are heavily weighted to content covering physical health, development, welfare and care of children. Of the 18 units of study, only a single unit specifically addresses working with infants and toddlers. The ‘Provide care for infants and toddlers’ (p. 12) unit includes content covering physical care, feeding, responding to and communicating effectively with children aged birth to 24 months and prepares students to ‘ensure that the children’s physical and emotional wellbeing is maintained’ (Industry Skills Council, 2013a, p. 2). Similarly, the only unit dealing directly with children’s learning, ‘Use an approved learning framework to guide practice’, introduces students to the range of approved learning frameworks including the EYLF and assists them to understand the principles and practice that contribute to children’s learning generally. Designed to introduce students to working with learning frameworks, the assessment criteria for this unit emphasise a supporting role in working collaboratively with other more highly qualified educators (Industry Skills Council, 2013b).

Typically completed within a total nominal workload of 614 study hours (usually six months), the Certificate III program includes just 16 days of practical experience. Given the limited coverage of content and the very minimal amount of practical experience, the credential may equip educators to attend to the immediate health, development, welfare and care needs of infants, under the supervision of a more highly qualified educator. Any assumption however, that this credential can stand alone in preparing students to take responsibility for the learning, growth and development of infants without supervision is highly questionable. Indeed the largest provider of children’s services in Australia, Goodstart Early Learning, highlighted such concerns from a risk and governance perspective in their response to the Productivity Commission’s draft recommendations (Goodstart Early Learning, 2014). The Goodstart submission pointed to significant differences between the Certificate III credential and the Diploma qualification, indicating that there was insufficient recognition by the Commission of the differing levels of skill and knowledge between the two programs. Their submission highlights a lack of clarity within the current policy framework of the roles and responsibilities of variously qualified educators and the current ambiguity of the term ‘educator’.

The term educator—ambiguous and misleading?

Introduction of the term ‘educator’ within the NQF to refer to ‘early childhood practitioners who work directly with children in early childhood settings’ (DEEWR, 2009, p. 45) was arguably an attempt to improve the professional status and standing of those working in the early childhood sector. Describing all practitioners, regardless of their qualifications or industrial classification, was perhaps a pragmatic attempt to not only streamline policy but to promote a more professional image for the early childhood sector. The term however can refer equally to those holding a six-month entry-level credential as well as those who hold a four- or five-year university Bachelor or Master’s degree. Veiled under the generic term ‘educator’, the precise qualifications and levels of expertise that individual educators hold can be shrouded. Parents and the broader community may assume a more highly qualified workforce than is actually the case.

Such an assumption perhaps obscures the full implications of the Productivity Commission’s recommendation for a minimally qualified workforce for infants ‘without compromising quality’. The expectation that the Certificate III program will adequately prepare educators to ‘provide children with opportunities to maximise their potential and develop a foundation for future success’ (DEEWR, 2009, p. 5) is a questionable ambition. In reality the Certificate III contains only minimal coverage of content involving children’s learning and development and cannot be considered a specialist qualification. It is not a qualification that the Productivity Commission considered appropriate to take responsibility for the learning of children over three years. Somewhat tellingly, the only qualification deemed appropriate for those responsible to deliver the educational program under Preschool Universal Access provisions is that of a Bachelor or Master’s Degree teacher. This recognition of the need for highly qualified teachers to take responsibility for learning programs for older pre-schoolers is silenced in regard to children under 36 months despite persistent evidence that learning begins at birth and that the first years are the most important (COAG, 2009; Expert Advisory Panel on Early Childhood Education and Care, 2009; Shonkoff & Phillips, 2000). The Productivity Commission’s recommendations are evidence of the vulnerability of infants within the policy context. Conveniently partitioned from older children, their learning potential can be easily dismissed as trivial and replaced with persuasive arguments to protect them from danger.

Conclusion

As Moss and Petrie (2002) argue, ‘Our construction of childhood and our images of the child represent ethical and political choices, made within larger frameworks of ideas, values and rationalities’ (p. 55). The examples provided above from two prominent public discourses demonstrate how images of infants might be transformed and re-shaped in order to reflect particular political ideologies and achieve specific policy objectives. The images then become powerful levers for a logical flow through to related policy decisions. Extending workforce reforms to include all children from birth acknowledged a more complex image of infants as learners and a corresponding commitment to an appropriate workforce. However, the tenuous nature of this image was evidenced in the Productivity Commission’s Draft Report and recommendations to segregate children under 36 months, significantly undermining workforce initiatives and returning to historic images of infants as waiting to learn.
This analysis suggests a discrepancy between the ambition of current Australian early childhood policy and the recommendations that the Productivity Commission put forward. We question the veracity of a recommendation claiming that the Certificate III credential can ‘without compromising quality’ deliver the best start in life for Australia’s children. Despite the Commission’s claims that an educational program should not be the focus of the care program for children aged birth to 36 months, the available evidence (Hertzman & Boyce, 2010; Shonkoff & Phillips, 2000; Sims, 2013) would suggest that this is a retrograde view of contemporary infants. Such a view takes insufficient account of the considerable body of evidence showing that the foundations for lifelong learning begin at birth. Contemporary images of infants—as learners from birth—demand a different workforce to that proposed by the Productivity Commission. Foundationally to the aspiration of a ‘best start in life’ is a workforce that can act beyond custodial care to a deep understanding of infants, their development and learning. Indeed if the recommendations of the Productivity Commission Draft Report were to be implemented there is no doubt that Australian early childhood would return to an era of custodial care for infants with little scope for realising the powerful capacities of infants as learners. It is likely that more specific and immediate attention to the impact of workforce policies in the experiences of infants is needed if Australia is to hold on to and realise its ambition for the ‘best start in life’.

Acknowledgements

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References


Introduction

From June 2012, regulatory authorities across Australia commenced a new assessment and rating process for early childhood education and care (ECEC) services. Like the previous assessment and rating system, the new process involves an authorised officer spending a designated amount of time in the ECEC service during assessment, gathering evidence to inform a rating against a range of quality areas. A significant change in the new process is the introduction of a revised quality standard, the National Quality Standard (NQS) for Early Childhood Education and Care.

The NQS sets out 58 elements of ECEC quality, organised into 18 standards and seven quality areas. These are said to encapsulate ‘the seven key quality areas that are important to outcomes for children’, based on international research (ACECQA, 2013a, p. 8). Guidance about what these standards look like in practice is available in the Guide to the National Quality Standard (ACECQA, 2013a) as well as national curriculum frameworks for ECEC services (DEEWR, 2009, 2011) and the Education and Care Services National Regulations.

None of these resources sets out exactly what each element looks like at the different levels of quality used in the assessment and rating process. This is the task of the NQS Assessment and Rating Instrument (hereafter ‘the Instrument’) (ACECQA, 2012). The Instrument is designed to guide authorised officers in conducting the assessment and rating process, and sets out brief descriptions of the three main quality levels (Working Towards NQS, Meeting NQS and Exceeding NQS) for each of the 58 elements in the NQS.

It is the opinion of this author that close study of the Instrument can offer important insights into what characterises practice at the different quality levels. Such insights are important for practitioners, in determining how to achieve the best outcomes for children and families as well as the best possible rating; and also for regulators, in determining what authorised officers must look for, when assessing practice and assigning ratings at each level. Drawing on the author’s prior experience as a Lead Assessor for Victoria, this paper seeks to help regulators and services make use of the Instrument in putting the NQS into practice.

Levels of quality in the NQS assessment and rating process

The NQS sets out five levels of quality, listed from lowest to highest:

- Significant Improvement Required.
- Working Towards NQS.
- Meeting NQS.
- Exceeding NQS.
- Excellent.
The following discussion focuses on the middle three ratings, which are applied most often during the day-to-day work of state assessors conducting NQS assessments. The Significant Improvement Required rating is only applied in exceptional cases of risk to children and the Excellent rating is applied through a separate rating process administered by the national regulator. For these reasons, these rating levels are excluded from the scope of this paper.

The NQS assessments measure quality through a complex, multi-level process, combining fixed procedural rules with professional judgements on the part of the assessor. After gathering evidence during an assessment and rating visit, assessors must first determine whether each of the 58 elements in the NQS is ‘Met’ or ‘Not met’ (up to six elements per standard). In doing so, assessors take into account the relevant regulations that sit alongside each of the elements, as well as the overall quality of that element of practice.

If any element is assessed as ‘Not met’, a rating of Working Towards NQS is automatically assigned to the relevant standard, quality area and to the service overall. A Significant Improvement Required rating may be applied in exceptional circumstances, but had only been applied to six services at the time of writing (ACECQA, 2014). If all elements within a standard are assessed as ‘Met’, the standard may be rated Meeting NQS or Exceeding NQS, depending on the authorised officer’s appraisal of the aggregate level of quality across its constituent elements.

The rating at the standard level has flow-on effects, as a minimum number of standards must be rated Exceeding NQS for an Exceeding NQS rating to be assigned to the quality area, or to the service overall (ACECQA, 2013b).

In summary, the assessment and rating process involves two points at which the assessors must exercise professional judgement: in determining whether an element is ‘Met’ or ‘Not met’, and then in determining whether a standard is Meeting NQS or Exceeding NQS (if all the constituent elements are ‘Met’). Due to the procedural rules that govern ratings at the quality area and service levels, these decisions have significant consequences for the overall outcome of the assessment and rating process for the service. The integrity of the process therefore depends upon these measurements being consistent and defensible.

Analysing the NQS Assessment and Rating Instrument

To engage with the difficult task of producing valid, reliable judgements of quality, the NQS assessment and rating process has drawn on established practices from educational research using standardised observational scales (Rothman et al., 2012). Research into quality in ECEC settings has made extensive use of the Early Childhood Environment Rating Scale-Revised (ECERS/ECERS-R) (Fenech, 2011). The Classroom Assessment Scoring System (CLASS), an observational scale with a stronger focus on pedagogical practice, has also been used in Australian and international research that has had significant impact on ECEC policy (Siraj-Blatchford, Sammons, Taggart, Sylva & Melhuish, 2006; Taylor, Ishimine, Cloney, Cleveland & Thorpe, 2013). Aspects of the methods used in research to apply these scales reliably can be seen in the assessment and rating process.

Observational scales such as CLASS and ECERS-R rely on various strategies to maintain consistency and rigour. Consistency across assessors, or ‘inter-rater reliability’, is a significant concern, as the level of subjectivity involved in observation systems makes them ‘particularly susceptible to error’ (Sandilos & DiPerna, 2011, p. 69). Extensive training, testing and re-testing are used to ensure that judgements of quality are consistent between assessors and over time. These strategies have been applied in the NQS assessment process, with all authorised officers required to undergo training, a ‘reliability test’ and ‘drift testing’ (ACECQA, n.d.).

Another strategy is the use of text-based instruments to guide assessors’ observations and rating decisions. Use of written codes or indicators is common in educational research, to manage the complexity of observational data and support consistency and rigour (Dowling & Brown, 2011). Both the CLASS and ECERS-R scales provide detailed descriptors for their constituent elements, setting out what ‘quality’ may be expected to look like at each rating level. These descriptions use clear, consistent language across the levels of quality, with minor variation in language to indicate how the quality levels may be differentiated; for example, ‘rarely’, ‘sometimes’ or ‘consistently’ (Pianta, La Paro & Hamre, 2008, p. 6). Examples of evidence that may contribute to the element are also provided.

Table 1. Element 1.1.6

<table>
<thead>
<tr>
<th>Working Towards NQS</th>
<th>Meeting NQS</th>
<th>Exceeding NQS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children’s agency is sometimes considered and encouraged in helping them to make choices and decisions about their world.</td>
<td>Each child’s agency is promoted, enabling them to make choices and decisions and influence events and their world.</td>
<td>Each child’s agency is consistently considered and promoted, enabling them to make a range of choices and decisions to influence events and their world.</td>
</tr>
</tbody>
</table>

The Instrument bears some resemblance to CLASS and ECERS-R by setting out descriptors at the three main quality levels for each element. An example, Element 1.1.6, is shown in Table 1.

Also shown in Table 1, the Instrument does not prescribe specific actions that must be taken to achieve each level of quality. This may be seen as a deliberate strategy by regulators, based on the principles of ‘performance-based regulation’—a regulatory model which enables service providers to determine what methods they will use to achieve desired outcomes (COAG, 2007). While the non-specificity gives scope for ECEC services to adapt their practice to their unique context and philosophy, it creates challenges for authorised officers in assessing which level of quality is being demonstrated. This difficulty is common to performance-based regulation, in that its flexibility ‘can lead to uncertainty as to whether the required standards are being met’ (Freiberg, 2010, p. 90).

**Method**

To address this difficulty, there appeared to be value in analysing the Instrument more closely, to identify any patterns that might help authorised officers use it in practice. This minor study used detailed content analysis, to examine how the Instrument describes differences in quality levels for the NQS. This was undertaken in a two-stage process. To begin with, textual differences across the descriptors for each quality level in each element were identified. Any text which appeared in all three descriptors for an element was excluded, enabling the analysis to focus on the differences between quality levels.

Once the textual differences had been identified, they were then coded according to the constructs of quality that the different words represented. These codes, or constructs, were developed inductively, emerging and undergoing refinement during the analysis. For example, with reference to Element 1.1.6 (Table 1), the textual differences were coded as follows:

- The element occurs ‘sometimes’ at Working Towards NQS, and ‘consistently’ at Exceeding NQS. This difference was coded as representing the construct frequency.
- The element is present for ‘children’ at Working Towards NQS; and for ‘each child’ at Meeting and Exceeding NQS. This difference was coded as inclusivity.
- The element is ‘considered and encouraged’ at Working Towards NQS; ‘promoted’ at Meeting NQS, suggesting a greater level of intentional effort; and ‘considered and promoted’ at Exceeding NQS, connoting both intentional effort and being informed by reflection. This difference was coded as representing the construct intentionality.
- The element results in children being ‘helped’ to ‘make choices and decisions’ at Working Towards NQS; ‘enabled’ to ‘make choices and decisions and influence events and their world’ at Meeting NQS; and ‘enabled’ to make ‘a range of choices and decisions to influence events and their world’ at Exceeding NQS. These differences were coded as outcome, as they suggest a better outcome has occurred for the child.

**Table 2. Constructs of quality found in the NQS Assessment and Rating Instrument**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Frequency</th>
<th>As quality increases for an element, this means that:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intentionality</td>
<td>33</td>
<td>The element is implemented more proactively or intentionally</td>
</tr>
<tr>
<td>Frequency</td>
<td>31</td>
<td>The element is implemented more frequently</td>
</tr>
<tr>
<td>Extent</td>
<td>30</td>
<td>The element is implemented to a greater extent</td>
</tr>
<tr>
<td>Inclusivity</td>
<td>24</td>
<td>The element includes each or every child or family</td>
</tr>
<tr>
<td>Outcome</td>
<td>16</td>
<td>An additional outcome is expected to result from the element</td>
</tr>
<tr>
<td>Collaboration</td>
<td>11</td>
<td>The element involves collaboration with children, families, other educators or services</td>
</tr>
<tr>
<td>Learning and development</td>
<td>9</td>
<td>The element is implemented in a way that contributes to children’s learning and development</td>
</tr>
<tr>
<td>Scope</td>
<td>9</td>
<td>The element has a broader scope (for example, applies to the whole program or service)</td>
</tr>
<tr>
<td>Variety</td>
<td>8</td>
<td>The element includes a greater variety of choices or components</td>
</tr>
<tr>
<td>Risk</td>
<td>7</td>
<td>The element does not involve unacceptable risk to children</td>
</tr>
<tr>
<td>Continuous improvement</td>
<td>4</td>
<td>The element is part of a commitment to continuous improvement in the service</td>
</tr>
<tr>
<td>Best practice</td>
<td>2</td>
<td>The element is implemented in a way that reflects ‘best practice’</td>
</tr>
</tbody>
</table>
After each difference had been coded, a simple quantitative analysis was undertaken to determine the number of constructs that appeared within each individual element; the frequency with which each construct appeared at each quality level; and the frequency with which each construct appeared in the Instrument overall. This analysis was intended to identify any patterns in the appearance of constructs, which may guide authorised officers and educators in understanding how the different levels of quality may appear in practice.

Results

A total of 12 constructs of quality were identified across all the element descriptions. The frequency with which these appeared in the Instrument is shown in Table 2.

The construct used most frequently in the Instrument to differentiate between quality levels (\(n = 33\)) was the intentionality with which an element was performed. This construct was articulated using a variety of words and phrases that indicated that the element was not being left to occur passively, but that the service was working actively to make it occur. For example, the descriptors for Element 6.2.1 state that family expertise is ‘acknowledged’ at Working Towards NQS level, but ‘actively sought’ at Exceeding NQS. Similarly, Element 3.1.1 differentiates between practices which ‘allow’ flexible use of facilities by children (Meeting NQS), through to practices which ‘promote’ this (Exceeding NQS). This construct is consistent with the notion of intentional teaching which underpins contemporary ECEC practice (DEEWR, 2009).

As intent may be difficult to observe, discussion between authorised officers and educators, or documentation of the extent behind the observed program, is likely to be necessary to determine the extent to which this construct is present.

The second most commonly occurring construct (\(n = 31\)) was the frequency with which the element occurred. In more than half the elements containing this construct (\(n = 17\)), it was represented solely by the addition of the word ‘consistently’ at Exceeding NQS level. In other elements (\(n = 7\)), the inclusion of ‘consistently’ or ‘regularly’ at Exceeding NQS level was offset by the word ‘sometimes’ at Working Towards NQS. In a small number of elements (\(n = 4\)), the word ‘consistently’ at Exceeding NQS was offset by ‘usually’ or ‘generally’ in Working Towards NQS. Text relating to frequency very seldom occurred in descriptors for Meeting NQS (\(n = 4\)). As it may be difficult for assessors to determine whether an element occurs ‘usually’ or ‘consistently’ when they are present in a service for a short time, discussion and sighting of documentation is again likely to be required.

The third most common construct (\(n = 30\)) was the extent to which an element was present. This construct also took a variety of textual forms in the Instrument, depending on how a continuum of extent might be framed for each element. Examples of such continuums include ‘basic—effective’ or ‘provide—maximise’. Sometimes the extent to which an element was implemented was indicated by the addition of a single adjective to differentiate between quality levels, such as ‘significant’ or ‘comprehensive’.

Other textual indicators of this construct included whether the element was ‘promoted’ or ‘well established’ in the program. This construct is perhaps the most open to subjective interpretation. Determining whether something is ‘basic’ or ‘effective’, or whether it is ‘comprehensive’, ‘significant’ or ‘embedded’ (rather than simply present at the service) appears to depend strongly on context-specific interpretation of what these adjectives mean in practice.

The last in the group of commonly occurring constructs was inclusivity (\(n = 24\)). This usually related to whether the element was present for ‘children’ or for ‘each child’. This construct reflects the underlying principles of the NQS, in that it aims to support ‘equity, inclusion and diversity’ (ACECQA, 2013a, p. 8). This construct was most commonly represented by the use of the word ‘children’ in the Working Towards NQS descriptor, replaced by ‘each child’ (\(n = 12\)) or ‘every child’ (\(n = 3\)) in the Meeting NQS and Exceeding NQS descriptors. Two instances of this construct focused on families, with the Exceeding NQS descriptor requiring the element to be present for ‘all’ families. Over half the elements containing this construct (\(n = 13\)) occur in Quality Area 1: Educational program and practice and Quality Area 5: Relationships with children, which are focused most closely on interactions with children.

Within-element differences

In the example of Element 1.1.6 (Table 1), the Instrument uses a range of constructs to differentiate between the three quality levels. The analysis found that this mix of constructs was common to all elements, with most elements (\(n = 40\)) using three or four constructs to differentiate between quality levels. It was also common for constructs to appear within the text for only two out of the three quality-level descriptors: for example, in Element 1.1.6, text relating to frequency occurs only at Working Towards NQS (‘sometimes’) and Exceeding NQS (‘consistently’). Of the 192 textual differences that were coded, only 81 were instances where the same construct appeared in all three quality levels for an element.

In around half the elements (\(n = 26\)), more constructs were used to differentiate between Meeting and Exceeding NQS, than between Working Towards and Meeting NQS. In no elements were a greater number of constructs used at the lower point of differentiation. This means that the decision between a Meeting or Exceeding rating is likely to be more complex for authorised officers than the ‘Met’ or ‘Not met’ decision, as they are more likely to be required to consider multiple constructs; for example, the frequency, intentionality, inclusivity and outcomes of an aspect of service practice.
Quality level differences

Some differences emerged in how often the constructs appeared at different quality levels:

- As may be expected, the construct of risk to children only appeared at Working Towards NQS, as this relates to minimum standards of regulatory compliance.
- Three common constructs, intentionality, extent and inclusivity were slightly more likely to appear at the Working Towards and Meeting NQS levels (although also often appeared at Exceeding NQS), suggesting that these are important considerations in attaining minimum standards of quality practice.
- The construct of frequency was polarised, with most occurrences appearing at Working Towards (‘sometimes’) or Exceeding NQS (‘consistently’). This implies the existence of a middle level of frequency at Meeting NQS, wherein the element ‘usually’ occurs.
- The constructs collaboration, continuous improvement, best practice and additional outcomes almost always appeared at higher quality levels. This suggests that these constructs will be most critical in decisions at the Meeting or Exceeding NQS level, although their absence may signify practice at Working Towards NQS level.

Discussion

It is hoped that this analysis will assist authorised officers and practitioners to recognise what the different quality levels may look like in broad terms. However, it is acknowledged that the relationship between the text of the Instrument and the constructs it signifies is far from fixed. A different researcher undertaking the same analysis might easily have arrived at different results, and achieving a shared understanding between researchers would involve extensive re-coding and negotiation, beyond what was possible in the scope of this small study. It may therefore be expected that authorised officers’ interpretations of the Instrument will also differ, as will the interpretations of practitioners in the field.

Consultations from the 2014 national review of the assessment and rating process suggest that the combined strategies of inter-rater reliability supports and text-based tools have still left room for improvement in the reliability and validity of NQS assessments (Woolcott Research and Engagement, 2014). While there clearly remains considerable scope for interpretation in the process, it may be hoped that the desire for consistency does not override the need for flexible assessment processes that accommodate the rich diversity of ECEC practice. While conducting assessments using the NQS Instrument may not be easy, due to the variation and complexity in the constructs used, it is certainly more worthwhile than prescriptive approaches which fail to capture the complexity and diversity of quality in ECEC settings.

References


Introduction

The type of experiences that young children have at home and in early childhood settings influences their development. Because early everyday experience is susceptible to change and improvement, most countries deploy policies to promote early childhood development and wellbeing, both within and beyond early childhood education and care (ECEC) centres. ECEC is a high-stakes area of interest. Current early childhood policies underpin the provision of universal preschool (Pre-K) programs (DEEWR, 2009; Weiland & Yoshikawa, 2013) and a range of specific activities proposed to improve the outcomes of children living in disadvantaged circumstances (Australian Productivity Commission, 2014; Eisenstadt, 2011). These include parenting programs, early child health and wellbeing initiatives, rating of the quality of ECEC programs and direct assessment of some young children to determine what levels of additional support are needed.

In Australia, families with young children are diverse on social, cultural, linguistic and economic grounds and children take part in ECEC programs according to family preferences and program availability. Australia adopted an Early Years Learning Framework (EYLF) (DEEWR, 2009) to provide vision and common purpose to ECEC programs and to promote play-based approaches to developing children’s skills and capabilities. The framework also guides the assessment of children’s progress. However, general predictors of child development such as age and maturation influence the way in which early educators set up play environments and assess the capabilities of young children during play.

This study arose from concern about how best to support young children who take part in early childhood programs and yet have low levels of skills and capabilities and as a result are at risk of poor progress. The development trajectories of a sample of Australian children who were...
programs are accountable through local organising units that operate within private homes. The educators leading these programs are accountable to the families they serve, focusing on the needs of the family. FDC describes programs that provide a full-day program up to five days per week, depending on the needs of the family. The average child-to-staff ratio in preschool settings is 15 children per staff member, although this ratio can vary depending on the setting.

In 2010 when baseline data were collected for this longitudinal study, the child-to-staff ratios typically provided 15 children per staff member daily, serving three- to five-year-old children. Four-year-olds are expected to receive 15 hours of program per week. In preschool settings, 85 per cent of children enrolled were aged four and 17 per cent were in preschool at age five. The average attendance in 2012 was for 15 hours per week (ABS, 2012). In Australia, some children access more than one type of provision and there is variability across states in the level and hours of attendance (Australian Productivity Commission, 2011).

In regard to informal education at home, the ABS (2012) reported that a large majority of children participate in some kind of informal learning with their parents. ‘Reading activities were the most common type of informal learning in which parents were involved. In the survey reference week, parents … read or listened to the reading of 96 per cent of three–eight year olds’ (ABS, 2012, p. 5).

Ethics
This study was conducted under the approvals and protocols sanctioned by the University of Melbourne Human Research Ethics Committee (ID 0932660.2) and in accordance with linked approvals provided by the Victorian Government Department of Education and Early Childhood Development, the Queensland Department of Education and Training and the relevant Catholic Education Archdioceses. Formal written consent was obtained from each child’s main caregiver, the educators, school and service leaders. Verbal consent to take part in, or decline, each of the assessment activities was obtained from each participant child. No specific ethical issues emerged during the study.

The study context: Australian ECEC provision
Since commencement of the Australian National Quality Framework (NQF) for early childhood provision (DEEWR, 2009), all approved programs are expected to provide early education and nurturing, subject to common regulations, standards and quality assurance processes. The programs are led by qualified early childhood professionals within kindergarten and preschool settings, long day care (LDC) centres and family day care (FDC) homes. Preschool is used in this paper to signify a play-based informal educational program delivered by a trained teacher in either a designated kindergarten facility or LDC centre. Preschool programs typically operate part time (two–five hours daily), serving three- to five-year-old children. Four-year-olds are expected to receive 15 hours of program per week. In 2010 when baseline data were collected for this study, the child-to-staff ratios typically provided 15 children per educator. Children within LDC facilities may attend for a full-day program up to five days per week, depending on the needs of the family. FDC describes programs that operate within private homes. The educators leading these programs are accountable through local organising units (schemes) that ensure regulatory compliance, engage in quality assessment and provide professional learning and other resources.

Early childhood programs are thought to offer broad experience, hope, optimism and the establishment of a strong foundation for each child’s development trajectory. National data on the usage of ECEC programs in 2011 indicated that 54 per cent of two- and three-year-old children and 40 per cent of four year olds attended childcare settings; the median time spent was 10 hours per week with nine per cent attending at least 35 hours per week (ABS, 2012). In preschool settings, 85 per cent of children enrolled were aged four and 17 per cent were in preschool at age five. The average attendance in 2012 was for 15 hours per week (ABS, 2013). In Australia, some children access more than one type of provision and there is variability across states in the level and hours of attendance (Australian Productivity Commission, 2011).

There is limited evidence about the developmental trajectories of young Australian children that is captured in the years before school. In Britain, Feinstein (2003) demonstrated that there is merit in assessing children as early as possible and that the results have strong predictive value. Analysing data from the British 1970 Birth Cohort Survey he concluded: ‘The lesson for policy makers is clear. There is mobility (as one would expect) after 22 or 42 months, but upward mobility is mainly for high or medium SES children. Low SES children do not, on average, overcome the hurdle of lower initial attainment, combined with continued low input’ (Feinstein, 2003, p. 30). Similar evidence has hitherto not been available in Australia; however, Brinkman and colleagues (2012) analysed national census data at school entry (five year olds), highlighting socioeconomic and gender inequalities in early development. Their further analyses confirmed that the evidence gathered at age five also predicted the children’s reading and numeracy skills that subsequently were tested at ages eight, 10 and 12 (Brinkman et al., 2013).

Moreover, the predictive capacity of oral language skills has long been recognised for later literacy achievement: Snow (1991) stressed the relevance of assessing children’s skill at three years, taking into account the environmental supports at home and in
preschool programs; and Kaefer and Neuman confirm the bi-directional and inextricable relationship between young children’s word-learning and their conceptual organisation: ‘language begets concepts and concepts beget language’ (Kaefer & Neuman, 2013, p. 7).

Well-designed and focused early childhood programs depend on robust child assessment evidence for their creation. Using evidence of children’s capabilities to design interventions can positively change trajectories of child development. For example, Weiland and Yoshikawa (2013) confirmed that the application of a consistent literacy, language and mathematics curricula in Pre-K, combined with coaching of teachers, improves the quality of implementation and the outcomes. Using a regression discontinuity design they found main effects showing improvements of 0.45 in receptive vocabulary, 0.62 in early reading, 0.58 in applied problems and 0.49 in numeracy and geometry. Smaller positive effects were found on measures of emotional functioning—working memory, inhibitory control and attention shifting.

Predictors of children’s cognitive skills and abilities

Other studies have shown that children who attend ECEC programs perform better on cognitive tasks (Niklas, Schmiedeler, Pröstler & Schneider, 2011; Walston & West, 2004) but the positive effects seem to depend both on the duration of attendance and the quality of the program (Bagnato, Seun & Devon, 2011; Sylvain, Melhuish, Sammons, Siraj-Blatchford & Taggart, 2004), as well as other classroom-level characteristics such as the composition of the group of children who are attending (Niklas et al., 2011; Palardy, 2008; Reid & Ready, 2013). Child characteristics, such as first language, are also associated with early verbal and mathematical abilities (Brooks-Gunn, Rouse & McLanahan, 2007); important predictors of young children’s competencies are found in the context of family and neighbourhood. The children who are read to more often or whose parents have higher levels of education, income or higher-status occupation often perform better on cognitive tasks than children who are read to less frequently or who come from families with a lower socioeconomic status (SES) (e.g. Aikens & Barbarin, 2008; Gubhaju et al., 2013; Niklas & Schneider, 2013). In the Australian context, holding a Health Care Card is another indicator of low SES since these are issued to families with low incomes or individuals receiving a Commonwealth pension.

Method

All children participating in the E4Kids study were included (n = 2498), with measures from the Woodcock-Johnson III (WJIII) Tests of Cognitive Abilities and Tests of Achievement (McGrew & Woodcock, 2001) applied, including: the Brief Intellectual Ability (BIA) scale—a measure made up of the comprehension knowledge, fluid reasoning and processing speed broad abilities within the CHC model of intelligence; the Verbal Ability (VA) cluster—a composite of vocabulary and lexical reasoning that accesses expressive language; and Applied Problems (AP), a measure which assesses very early maths knowledge and concepts related to number, operations, shape, direction and location.

Repeated observations of this sample in 2010, 2011 and 2012 are used to represent development over time. The scales are reported on the W scale—a Rasch transformation of scores that are continuous or interval in nature (McGrew & Woodcock, 2001). Key covariates were sourced from the Main Caregiver Survey including: caregiver Health Care Card status; education level and employment status; household composition and income; child’s main language and frequency a child is read to. The Australian Bureau of Statistics Index of Relative Socio-economic Advantage and Disadvantage (IRSAD) was applied in the analysis. IRSAD is a composite of 21 indicators measuring advantage (e.g. number of people with household equalised income greater than AUD $52,000 per annum; approximately the ninth and tenth deciles for Australian household income) and disadvantage (e.g. people aged 15 years and over with no post-school qualifications). Hence, the IRSAD measures a continuum of both advantage and disadvantage: higher ranked areas are described as both more advantaged and less disadvantaged than lower ranked areas.

Analysis

Specific hypotheses were developed and cross-tabulations conducted of the key covariates with children’s baseline levels of ability. Chi-square tests of goodness of fit were used to assess differences between levels of baseline ability. A variable was derived to group children’s relative development based on their baseline assessment and to control for chronological age, since participants entered the study between the age of two and four years. For each test, a quotient of the estimated age equivalent and the child’s chronological age was used. Based on this baseline performance score, quintiles are calculated: the score attributed to each child reflects the quintile they are in (one = lowest to five = highest).

The key covariates, listed above, were then defined as binary variables to reflect presence and absence and reported in tabular form. Family SES is represented on a five-point scale reflecting the IRSAD quintiles in which the household is located. Quintile cut-offs were weighted so that each represents approximately equal groups of the Australian population of children aged one to five years. The population of children by age is estimated using the ABS Estimated Resident Population (ERP) by year of birth. Therefore the measure of family SES can be interpreted to present relative levels of disadvantage and advantage experienced by typical families in Australia.

We first tested the null hypothesis: no relationship between baseline measures of VA, BIA, AP and the key
familial covariates of Health Care Card status, parental education and employment status, household composition and total household income. In addition, for all WJIII tests, scores are compared between groups that differ in regard to child language at home and the number of days the main caregiver read to the child. Thus, we also tested whether children with English as their main language and children who are read to daily outperform other children in the cognitive outcomes. To obtain results for the whole sample, multiple imputations were used, following Schafer and Graham (2002).

Next, we tested the relationship between baseline ability and later ability using a linear (OLS) regression to test the interaction of ability on the relationship between age and achievement. Individual trajectories of children were subsequently modelled to undertake a more nuanced analysis of baseline assessment and later development. A multiple-group linear growth model (LGM) analysis was conducted. Group membership was defined by the children’s baseline BIA score: the first quintile makes up the ‘low’ group; the next three quintiles make up the ‘mid’ group; and the highest quintile makes up the ‘high’ group. Individually varying times of observation (children were not observed on the highest quintile makes up the ‘high’ group. Individually varying times of observation (children were not observed on the outcome measures on the same day or at the same age) were modelled using the TSCORES function in MPlus version 7.3 to allow time to act as a covariate on the LGM (Muthén & Muthén, 2012). To interpret change in development over time, intercept (representing the initial level of ability) and slope (representing change in development over time) growth factors are estimated for each WJIII test simultaneously so that the covariance between the growth factors can be explored. The specification and the hierarchical testing of parameters between groups are described in more detail in Muthén (2004).

Results

Table 1 reports the number of children in the study and their age at testing in each study year. Because all outcome testing was conducted on the same day, the age of each child is constant between tests. There is little change in the number of children completing each test and response was high. At least 94 per cent of children had a valid score on all three tests. As expected, as the cohort grows older between each year, average scores increase, reflecting the nature of the scale.

The observed E4Kids data closely follows the normative relationship between W scores and age (Figure 1): this measure of children’s intellect, verbal ability and capacity in addressing applied problems is not biased for age—children of all ages are distributed above and below the measure of expected ability. The scatter of small black dots on the plot are the E4Kids observations. The larger (bold) black dots and the grey-scale error bars are the normative values: the expected score at each month of age and one standard deviation around the point. The grey line is the average of the E4Kids observations using linear smoothing. For AP there is some floor-effect with children grouping at low levels of ability (below 450) showing little differentiation at increasing levels of age.

Figure 2 presents the average relationship between child age and W scores, grouped according to ability quintiles (one—lowest; five—highest). At baseline measurement, the children registering as having low levels of ability persisted at low levels compared to their peers over time. Of particular note, children scoring at low-level relative to their peers were also scoring low in an absolute sense—these children scored below the expected normative level for their age. This gap between expected score and achieved score also became more pronounced over time.

Children in the middle quintiles tend to be at or around the normative score. Children in the highest quintile tend to be above the normative score for their age. Children in the lowest performance quintile are one standard deviation or more below the expected level of ability for their age.

To test this average relationship, a linear growth model was used to estimate the individual slopes of children and means for each quintile group. The hierarchical testing encompassed seven nested models, beginning with a fully invariant model and progressively freeing the parameters. This type of modelling has greater explanatory power and verified that children in different baseline groups experience different rates of change and the variance in growth factors is different. The children from the high, medium and low baseline groups have different developmental trajectories and these are distributed differently between the groups.

The children’s measured level of ability at entry moderates both the rate of growth and the variability in scores between groups. Although the children in the low levels of ability group do develop each year before formal schooling, their development does not accelerate towards the expected ability-level for their age.

Table 1. Count of children, age and test scores in each study year

<table>
<thead>
<tr>
<th>N (total)</th>
<th>Age months M (SD)*</th>
<th>BIA W M (SD)</th>
<th>VA W M (SD)</th>
<th>AP W M (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>2106</td>
<td>48.1 (6.9)</td>
<td>441.65 (12.77)</td>
<td>450.43 (13.73)</td>
</tr>
<tr>
<td>2011</td>
<td>2188</td>
<td>57.7 (8.0)</td>
<td>453.22 (14.24)</td>
<td>459.66 (14.23)</td>
</tr>
<tr>
<td>2012</td>
<td>2091</td>
<td>71.6 (7.9)</td>
<td>466.88 (13.62)</td>
<td>471.17 (14.09)</td>
</tr>
</tbody>
</table>

*SD – standard deviation
Figure 1. E4Kids data aligned with W norms for age. (Scatter plots of the relationship of WJIII W score and child age with study trend [grey line]. Superimposed are Australian normative scores [bold black dotted line] and variance [error bars]).

Figure 2. Average relationship between child age and WJIII W scores in 2012 with each quintile group conditioned on 2010 (baseline) W score.
We established through the analyses that children with mid- to high-level ability at baseline stay at or above their expected level of ability while children with low initial abilities stay below. Further, the differences between children at baseline were strongly associated with family SES: there are social gradients of achievement evident across the years prior to school.

By the time children reached formal school education, there were non-random and observable developmental differences between children that had become more pronounced over time. Figure 3 shows that in the most disadvantaged areas, approximately 30–40 per cent of children are achieving at the lowest baseline level. Conversely, of those in the most advantaged areas, approximately 30–40 per cent of children achieve at the highest baseline level. There is a known association between the SES of the community in which the family lives and the SES of the community in which the child’s ECEC service operates: the levels tend to be the same (see Cloney, Cleveland, Hattie & Tayler, 2015; Cloney, Page, Tayler & Church, 2013). Because of this, the same pattern of distribution of baseline scores is seen for the SES of the community in which a service operates. In sum, children attending services in low SES areas tend to score low at baseline while children attending services in high SES areas score high at baseline; this is a significant relationship for all tests.

Some of these SES differences may depend on familial process characteristics such as the home learning environment provided by the parent. A strong indicator of the home learning environment is reading to a child. Another familial characteristic closely associated with child outcome is the main language of a child. Figures 4 and 5, respectively, show the comparison of children who were read to daily, or not, and children who spoke English as a main language, or not. On all outcome measures, significant differences (small effects, shown in Figure 4 and 5) were found. Children who were read to daily and who had English as a main language not only showed greater verbal abilities, but also greater intellectual and mathematical abilities, indicating the importance of these family characteristics.

Similar associations are also seen with key family demographics. Table 2 shows the proportion of children within each quintile of each test and their associated familial characteristics. Children in the first (lowest) quintile are in families where main caregivers are more likely to hold a Health Care Card and have lower levels of education, as well as lower income as a single parent.

Figure 3. Distribution of abilities of children in the most advantaged and disadvantaged areas
Figure 4. Differences in the outcome measures at t1 depending on whether the child was read to, or not, every day

Figure 5. Differences in the outcome measures based upon whether English is or is not the child’s main language

Table 2. Children within each quintile and their associated familial characteristics

<table>
<thead>
<tr>
<th>Quintile</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Care Card (%)</td>
<td>39</td>
<td>29</td>
<td>21</td>
<td>17</td>
<td>16</td>
<td>**</td>
</tr>
<tr>
<td>Single parent household (%)</td>
<td>21</td>
<td>14</td>
<td>8</td>
<td>9</td>
<td>7</td>
<td>*</td>
</tr>
<tr>
<td>Main caregiver education Year 10 or less (%)</td>
<td>18</td>
<td>13</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>*</td>
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<tr>
<td>Main caregiver education Degree or greater (%)</td>
<td>28</td>
<td>39</td>
<td>45</td>
<td>53</td>
<td>67</td>
<td>***</td>
</tr>
<tr>
<td>Main caregiver employed (%)</td>
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<td>67</td>
<td>58</td>
<td>60</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Household income &lt; $75 000 pa (%)</td>
<td>47</td>
<td>40</td>
<td>34</td>
<td>27</td>
<td>17</td>
<td>**</td>
</tr>
<tr>
<td>VA</td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>Health Care Card (%)</td>
<td>41</td>
<td>25</td>
<td>26</td>
<td>14</td>
<td>16</td>
<td>***</td>
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<tr>
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<td>12</td>
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<td>5</td>
<td>*</td>
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<tr>
<td>Main caregiver education Year 10 or less (%)</td>
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<td>12</td>
<td>8</td>
<td>4</td>
<td></td>
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<td>Main caregiver education Degree or greater (%)</td>
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<td>45</td>
<td>52</td>
<td>66</td>
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<tr>
<td>Main caregiver employed (%)</td>
<td>51</td>
<td>61</td>
<td>58</td>
<td>64</td>
<td>59</td>
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<td>Household income &lt; $75 000 pa (%)</td>
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<td>36</td>
<td>34</td>
<td>24</td>
<td>17</td>
<td>***</td>
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<tr>
<td>AP</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Health Care Card (%)</td>
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<td>22</td>
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<td>7</td>
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<tr>
<td>Main caregiver education Year 10 or less (%)</td>
<td>16</td>
<td>14</td>
<td>10</td>
<td>4</td>
<td>4</td>
<td>*</td>
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<tr>
<td>Main caregiver education Degree or greater (%)</td>
<td>31</td>
<td>38</td>
<td>43</td>
<td>54</td>
<td>66</td>
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<tr>
<td>Main caregiver employed (%)</td>
<td>52</td>
<td>59</td>
<td>63</td>
<td>61</td>
<td>60</td>
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<tr>
<td>Household income &lt; $75 000 pa (%)</td>
<td>46</td>
<td>39</td>
<td>31</td>
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<td>21</td>
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</tbody>
</table>

Sig. codes: *** p < 0.001, ** p < 0.01, * p < 0.05
Note: ‘sig’ is taken from a chi-square test of goodness of fit, assuming equal probabilities within each quintile.

Together, these findings verify that there is a persistent relationship between children’s level of ability from age two to four years, the family Health Care Card status, parental education and employment status, household composition, total household income, child main language and the frequency of reading to the child. There is also a strong association between child ability and the location in which the family lives. In all cases the relationship is consistent with a vulnerability gradient: more advantaged children perform better in the range of measures applied. The data supports the notion of skill begetting skill and suggest that thresholds of ability make a difference to the rate at which children progress within typical everyday ECEC programs, in the absence of special interventions.
Discussion

This study assessed children as they progressed through typical Australian ECEC programs. The analysis presents an exploration of E4kids data related to key elements of children’s intellectual development: the Brief Intellectual Ability scale, Verbal Ability and Applied Problems. The data align well with pre-established Australian normative data, with the majority of observations occurring close to the norm values. This data creates a useful opportunity to describe the underlying inputs to changes in children’s level of ability and they confirm variability in the developmental pathways of children long in advance of their entry to school. Children who start at low levels of ability tend to attend ECEC services in lower SES areas and they are from families who live in low SES areas. These children come from lower income households, including from single parent families. They also tend to have main caregivers who are relatively less educated and more likely to have an Australian Health Care Card; they more often speak a language other than English at home and are read to less often.

Planning effective individualised programs to promote learning requires detailed evidence of what children understand and can do. In the typical programs and in the absence of no specific additional supports or interventions, our analyses support the finding that children with low baseline scores tend to remain below the level of ability expected for their age two years later. With typical ECEC provision, in an absolute sense, the differences between children on entry are persistent and those in the low baseline group continue to achieve below the expected level of ability. This finding lends support for intensive early intervention programs and leaves open the question of how high the quality of the ECEC program needs to be in order to make a significant positive difference to children entering with low levels of ability.

Further, the intensity of learning support is likely to be important and providing consistent support within the program and at home in order to grow the rate of progress is a compelling step. Even if these children were supported enough to ensure they were able to achieve a rate of growth that is similar to children in the middle range of ability, then the social gradient would not widen in the years prior to school. On average, although these children continued to develop over time, the differences across quintiles grew wider. This is a concerning finding which provokes consideration of the kinds of optimal play-based interventions that are necessary within and beyond the typical programs in which the children took part. There is evidence for the sociological phenomena of the Matthew effect—skill begets skill. Later achievement is affected by earlier achievement. Without specific support and intervention programs, the children who begin at lower levels experience compounding difficulties causing them to increasingly lose ground (Stanovich, 1986).

Our findings verify that there are differences in the rate and timing of individual cognitive growth. The overall pattern observed is that children recording the lowest baseline ability, in an absolute sense, remain in the lowest levels of ability. There is a clear program challenge to respond to the evidence that, while attending ECEC programs, they further lose ground in verbal ability, a proxy for expressive language and vocabulary, and they are stagnant in terms of cognitive ability. We do observe some improvement in applied problems, as a proxy for early maths ability. This test resulted in a very low baseline for the low group and their improvements over time still left them well behind their peers, two years later. Measured improvements may also be associated with entry into formal education lifting these scores off an effective floor at the bottom of the tests’ scales. Future analysis using the NAPLAN results for E4Kids children at age eight will demonstrate whether, or not, the differences between children found by entry to school are maintained or whether the observed improvement accelerates to the normative level of ability. Given the other observed findings, this appears unlikely.

It is worth noting that the growth within the low group shows much more variability than in other groups. The other groups show greater consistency around the estimates of the means of the growth factors. This suggests that there are multiple trajectories being observed within the low group that may be explained by a range of inputs (including ECEC programs) that interact to produce different outcomes over time. The implication is that these children may exhibit more diverse development trajectories per se, and in turn they may have more diverse backgrounds and experiences relative to other groups in the analysis. Through the growth models analyses it was clear that the relative rates of development of these children are more nuanced: children with low baseline ability have highly variable growth trajectories. This finding underlines the importance of having substantial individual developmental evidence of each child’s abilities and capabilities in these preschool years.

However, much more could be done if lessons are to be drawn from other empirical studies. Results from well-established randomised control trials demonstrate that well-designed and specific educational programs can positively change the trajectories of such children and close gaps in rates of achievement—rather than merely maintaining a standard rate of growth in achievement (see, for example, Ramey, Sparling & Ramey, 2012). The Abecedarian studies adopted language intensive programs that are designed to affect the kinds of abilities measured in this study.

Our findings suggest the importance, within ECEC programs, of developing children’s language and thinking, especially for those demonstrating low performance: building vocabulary, having language-rich back-and-forth exchanges between adult and child and promoting the
expressive aspects of children's language usage. Placing these children in programs of 'play-as-usual' seems problematic for their ongoing progress. These E4Kids findings provide evidence that developmental differences among study children attending typical Australian programs are maintained over time and that they, in effect, grow larger in the years before school, despite the presence of engagement in these everyday ECEC programs and not including special interventions.

Within this investigation we did not test the effect of program duration for each child and program quality; these variables are the subject of current analyses of E4Kids evidence. The findings established from the questions tested in this paper align with the selection hypothesis: children's level of ability is correlated with family circumstance and family circumstances have a large influence on the type and quality of both home and out-of-home (ECEC program) experiences that families choose. This was noted particularly where an association was found between families reading to the child daily at home and children's higher cognitive and language scores. Further work is necessary to pursue the effect of different 'spells' in programs (dosage) and the effects of program type, as well as relative level of quality of the programs attended by E4Kids participants.

Conclusion

Young children who are vulnerable because of familial and community characteristics, as well as their absolute level of ability, are demonstrated in this study to be at persistent risk of doing poorly over time. In this non-experimental data drawn from the progression of children through typical everyday ECEC programs, children who do not receive specific interventions early continue to perform below the level expected by normative data and relative to their more advantaged peers, albeit having an ECEC program dosage that may be below what is needed to ensure solid progress. These findings offer compelling background and justification for giving more attention to assessing skills and abilities early. In the least this would support the learning of children who are at risk of poor performance and aid the design of individualised programs that are known to accelerate development. Even if developmental growth for the low performing group was maintained at a normal range relative to peers with mid-levels of performance the benefit would be that the gap—the social gradient before formal school—begins to decrease. Positively changing the trajectory of children at risk has been shown to be achievable, with gaps in the rate of achievement having been decreased when validated early interventions are implemented with fidelity and with sufficient intensity in the years before school.

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Endnote

1 Preschool refers to any approved early childhood education and care program for children in the years before the first school year.

References


Young children dancing mathematical thinking

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EARLY CHILDHOOD EDUCATORS ARE required to recognise multiple sources of evidence of children's mathematical thinking. This paper encourages early childhood educators to consider how young children's spontaneous dance improvisations provide evidence of their exploration of the mathematical concepts of spatial orientation and spatial visualisation. In this research, examples of four-year-old children's improvisational dance are drawn from a larger corpus of children's dance vignettes and analysed, highlighting children's demonstrations of embodied spatial orientation and spatial visualisation. Recognising children's spatial thinking provides opportunities for educators to develop contingent learning experiences that facilitate children's exploration of concepts of lines, angles, direction and two- and three-dimensional shapes through other forms of symbolic expression.

Introduction

In high-quality early childhood education and care (ECEC) programs, effective educators observe what children make, say or do; engage in meaningful conversations with children and their families in order to gain an understanding of children's evolving knowledge and interests; and then plan learning experiences that provide children with opportunities to consolidate and extend their understanding. Narrowing our focus to children's mathematical thinking, early childhood educators in Australia are specifically required to support children's mathematical skills when planning learning experiences (ACECQA, 2011; DEEWR, 2009) based on their observation and analysis of children's interest, skills and understanding.

When children verbalise mathematical thinking, opportunities are clearly presented for educators to reflect on this understanding and to plan accordingly. However, there are times when children demonstrate mathematical thinking non-verbally, for example through gesture (Elia, Gagatsis & van den Heuvel-Panhuizen, 2014). Recognising children's non-verbal, embodied demonstrations of their thinking, and planning contingent learning experiences that provide opportunities for children to transfer this thinking to other activities is important, as it facilitates children making connections between related concepts and thus generalising their understanding. However, recognising mathematical thinking and then planning such learning experiences can be complicated as early childhood educators report anxiety about the adequacy of their own mathematical knowledge (Basit, 2003; Cook, 1996; Sarama, 2002) and may choose careers in early childhood education based on an assumption that they will not be required to teach mathematics to children in the years prior to formal school education (Ginsburg, Duch, Ertle & Noble, 2012).

This paper reopens a discussion about the relationship between dance and spatial thinking that began in the late 1970s when a study found that children learnt spatial concepts more effectively through movement than through visual cues and related dialogue (Priddle, 1978). Children's improvisational dance presents opportunities for early childhood educators to respond to children about the lines, rotations and two- and three-dimensional shapes they make with their bodies. Aligned with the practice principles articulated in the Victorian Early Years Learning and Development Framework (DEECD, 2009), the purpose of this paper is to draw attention to children's improvisational dance as an additional source of observational evidence of children's spatial thinking that enables practitioners to assess and plan effectively.
Literature review

Learning occurs through touch, sight, sound and movement: children’s manipulation of objects in their environment draws on a sensory subsystem and a motor subsystem that together enable haptic apprehension and recognition of objects (Lederman & Klatzky, 1987). These haptic subsystems are experienced non-verbally and enable the body to become an object that the child uses to explore and discover the world and in turn make meaning of both perception and physical experience. Furthermore, mathematical learning not only occurs in the head, to be communicated by written or spoken symbols, but is also expressed in the form of ‘sensuous cognition’ (Radford, 2009, p. 112) which can be experienced in and through the body as articulated by Gardner’s Theory of Multiple Intelligences (2011):

When dance educators include activities that strengthen the musical, visual, linguistic, logico-mathematical, interpersonal, intrapersonal and bodily-kinesthetic intelligences into every class, each student is touched and learning is increased (Gilbert, 2003, p. 28).

Improvisational dance

Dance provides powerful opportunities for children to refine their motor skills (Ashley, 2002; Davies, 2003; Pugh McCutchen, 2006; Sansom, 2011; Schiller & Meiners, 2003; Smith-Autard, 2002). In so doing, children embody many foundational mathematical principles and concepts such as two- and three-dimensional shape, pattern, sequencing, orientation, levels, counting and general spatial thinking.

The ‘father of modern dance theory’, Rudolf von Laban (1879–1958), who has been described as ‘a philosopher, a scientist, a mathematician and a theoretician’ (Newlove & Dalby, 2004, p. 11), was specifically interested in the relationship between the body, movement and the human mind, expounding the notion of affective contribution to the development of the moving, feeling, being individual. Laban’s lasting contribution to dance in education was his formal identification of the movement principles of ‘space, force, time and flow’ (Laban, 1963). These principles constitute the four basic elements of dance and may be understood in terms of: (1) what action is being performed and what body parts are involved; (2) where in space the actions begin, where they travel to and where they end; (3) how the actions use time and force; and (4) how the actions connect to other people or objects.

Dance relies on the intrinsic motivation of individuals to express their ideas, thoughts and feelings, using naturally occurring body movement. As such, dance can be understood as a semiotic tool that is brought to life by the individual’s manipulation and performance of dance elements, including explorations of space through levels and pathways that can be curved, linear and zigzag. Gestures may draw attention to the three-dimensionality of the body, rhythmic patterning and sequencing. In turn, these draw on numeric understanding, memory and personal motif creations that combine the dimensions of time and effort in a vibrant dynamic interplay that is at the heart of expressive communication. Dance is thus a significant meaning-making tool for the young child.

To foreground the use of dance as a meaning-making tool, it is necessary to understand that semiotics, as the study of signs (a sign being something that stands for something else), is concerned with ‘meanings and messages in all their forms and in all their contexts’ (Innis, 1965, p. 8). Such signs serve as carriers of cultural thought to support meaning making (Vygotsky, 1986). This paper argues that the human body, as the instrument or agent of dance, is one such mediating tool. Bodily gestures and the manipulation of dance elements are vehicles of symbolisation to communicate meaning—in the context of this paper, to communicate the child’s spatial orientation and spatial visualisation.

Embodied spatial thinking

By the time children commence formal education, they demonstrate wide variability in their number knowledge, the platform on which formal mathematics learning is based (Gould, 2012); however, the origins of this variability emerge very early in life. While numerical concepts ‘have an ontogenetic origin and a neural basis that is independent of language’ (Gelman & Butterworth, 2005, p. 797), children engage with their environments from birth and begin to observe patterns in speech, movement and interactions, as well as the location of objects in the environment both in relation to themselves and in relation to other objects. Research suggests that spatial thinking skills are associated with achievement in the sciences, mathematics and engineering, and that gender differences in some spatial thinking skills are apparent as early as five years of age (Ehrlich, Levine & Goldin-Meadow, 2006).

In this paper, the focus is directed towards children’s improvisational dance as evidence of embodied spatial thinking. Evidence suggests that emerging mental rotation and perspective-taking abilities are linked to children’s motor development; consequently providing opportunities for children to explore spatial thinking through motor activities is likely to support these emerging skills (Newcombe & Frick, 2010).


Central to spatial intelligence are the capacities to perceive the visual world accurately, to perform transformations and modifications upon one’s initial perceptions, and to be able to re-create aspects of one’s visual experience, even in the absence of relevant physical stimuli … Once one is asked to manipulate the form or the object, appreciating how
it will be apprehended from another viewing angle, or how it would look (or feel) if turned around, one enters fully into the spatial realm, for a manipulation through space has been required.

Sarama and Clements (2009) conceptualise spatial thinking as incorporating two competencies: spatial orientation and spatial visualisation. Initially, spatial orientation concerns one’s own position in and movement through space and becomes more abstract as spatial relations are increasingly refined and recognised as distinct from one’s immediate environment. Later, spatial orientation concerns the ability to seek out relevant information in order to map positions in space and may be linked to memory systems. Spatial visualisation, on the other hand, refers to the ability to construct a mental image of an object and then mentally to manipulate the object (Sarama & Clements, 2009).

It is important for early childhood educators to provide purposefully diverse opportunities for children to explore spatial concepts for several reasons: (1) spatial thinking equips humans to navigate in, represent and manipulate the physical environment in a way that facilitates efficient operation within and upon the environment; (2) spatial thinking and visualisation are important components of the way we think and remember; (3) spatial thinking provides a strategy for considering other concepts that are not overtly spatial such as ordinality, hierarchy and logic; and (4) the contribution that spatial thinking makes to science, technology, engineering and mathematics (Newcombe & Frick, 2010).

**Method**

This paper uses dance episodes to focus attention on how four-year-old children demonstrate spatial thinking and learning through aesthetically imbued movement improvisation.

Data for this study were drawn from a larger corpus of data generated during a creative dance program presented at an early learning centre in an inner city suburb of Melbourne. Twenty four-year-old children participated in open-ended dance improvisation (Deans, 2015). Ethics approval was granted by the university’s Human Ethics Research Committee (HERC Project No. 0830331). Parental consent was granted for children to participate in the dance program; in addition, children consented to be involved in the research program by completing an ‘I want to dance’ child consent form (Conroy & Harcourt, 2009) and ongoing child assent was obtained throughout.

Video-recordings of dance improvisations performed by three children were analysed as sources of evidence of children exploring spatial orientation and spatial visualisation. Digital video recordings are increasingly being used in educational settings as primary field materials that are later treated as data to inform the research questions (Derry, 2007; Erickson, 1982, 2006; Hall, 2000) as video enables teachers and researchers to capture the complexity of children’s play and learning. The dance improvisations captured included two solo dances: one performed by a girl to Tchaikovsky’s ‘Waltz of the flowers’ and the other performed by a boy to a hum-drum rhythm provided by the specialist dance teacher. The third dancer invited five of her peers to join her in the dance and selected one of Mozart’s Violin concertos. The dances varied from one minute 21 seconds to one minute 37 seconds in duration. Each dance was video-recorded, transcribed and analysed for evidence of spatial thinking.

The inductive and deductive analysis of the dance videos was an iterative analytical process where the videos were transcribed and analysed one by one in order to identify examples of spatial thinking and to make empirically substantiated claims (Derry, 2007). As examples of spatial thinking emerged, the researchers reviewed the previously analysed videos in order to determine whether similar demonstrations of spatial thinking were apparent.

**Analysis and findings**

Despite the brevity of the dances, seven categories of spatial thinking were apparent in the three dances and are discussed below.

**Position of the dancer and of the dance props**

**Dancer 1** The dance began with the child skipping around the circumference of a small imaginary circle, then during one circuit, markedly enlarged the size of the circle and continued to dance around the circumference of the large circle nine times (Figure 1).

**Dancer 2** The child’s dance was oriented parallel to the boundaries of the space (a wall on three sides and the audience seated on the fourth side). At times she moved in an arc from the upper right-hand corner to the upper left-hand corner, returning in a similar manner.

**Dancer 3** The child arranged two large pieces of stretch lycra material parallel to the right-hand wall before re-locating them to the centre of the space. Electing to incorporate five peers in the dance, the lead dancer directed her peers to sit on one and beneath another piece of fabric. This position in the space marked the start of the dance, was returned to mid-way through the dance and was again returned to at the end of the dance.

**Lines and angles in body shapes**

The adoption of diverse body shapes was observed both within and between dancers.

**Dancer 1** Standing tall and straight, the dancer held his arms tucked in close to his body, with his elbows and his wrists bent at 90-degree angles.
Dancer 2  Arms were held in particular lines: creating a 180-degree angle across the body (Figure 2), or at 90 degrees to the body. At times the dancer moved onto the floor and lay prone on her back, bending her knees and clasping her feet to her sides to create a symmetrical shape, rolling over while holding this position to transform and turn the shape she had made with her body.

Dancer 3  When asked where the other dancers should position themselves, a two-armed point directly to the centre of the space was the immediate response, a gesture that demonstrated spatial visualisation.

Spatial movements

Dancer 1  The dancer’s arms were swung in parallel arcs, three times from shoulder height (Figure 3) and then subsequently from hip height throughout the dance.

Dancers 2 and 3  Arms (‘wings’) were outstretched and waved up and down.

High or low body positions

Dancer 1  The child started the dance standing tall and retained an upright position throughout the dance until its termination, at which point he crouched down and then sat back on his heels to mark the end of his performance.

Dancer 2  Throughout this dance, body positions varied markedly from rolling across the floor to rising high on toes with arms and legs extended.

Dancer 3  Body positions varied in this dance. The children knelt on a ‘nest’ at three points during the dance, before running (flying) around the nest on their toes with arms outstretched (wings). The lead dancer directed these contrasting body positions throughout, reflecting the embodied mental images that she had created and which she wished to communicate to her peers (Figure 4). This also demonstrates that young children have the capacity to construct and deconstruct two- or three-dimensional body shapes.

Direction of travel

Dancer 1  The child’s dance was a fast paced, clockwise progression around a small circle (two circuits) and thereafter a larger circle (nine circuits). At the end of the dance, the child moved directly from the circumference of the circle towards the centre of the circle, concluding the dance by stopping at a point mid-way along the radius.

Dancer 2  The child travelled along the boundaries of the space, at times tracing an arc across the space.

Dancer 3  The lead dancer oriented her position in the space relative to her peers in particular ways: (a) to demonstrate what she wished her peers to do (such as return to the nest and to transform their bodies from elevated and moving to low and stationary); (b) to demonstrate her difference from the group by reversing her direction to move (fly) in a semi-circular clockwise direction when all others were moving (flying) in an anti-clockwise direction (Figure 5); or (c) by taking a line across the circle that was being navigated by her peers.
Turns and rotations

Dancer 1  The entire dance was performed by tracing the circumference of a circle.

Dancer 2  The child performed multiple vertical and horizontal slides, flips, rolls and rotations of her body as she simultaneously navigated through space (Figure 6).

Dancer 3  The children repeatedly ran lightly (flew) around the nest.

Two- and three-dimensional shapes (including capacity)

Dancer 1  Throughout the dance, the child embodied a two-dimensional shape, holding his body erect.

Dancer 2  The child embodied multiple two- and three-dimensional shapes: she stood on her toes with her arms outstretched in a tall, wide, flat shape; she pulled her arms and legs towards her torso to form a sphere; and she positioned her hands and feet on the ground and pushed her hips to the ceiling (Figure 7) to create a large, hollow shape while she watched the shadow cast by her body. The final position she took to indicate the end of her dance was kneeling on one knee with her right arm resting at her side while she held her left arm extended at 90 degrees to her body for seven seconds.

Dancer 3  While the focus of this study is on non-verbal demonstrations of spatial visualisation, the third dancer indicated her understanding of the capacity of the three-dimensional shape she sought to create by placing all the birds in the nest and also by her remark, ‘Just try an’ squeeze in, okay?’ The children embodied two-dimensional shapes when the dancers flew with outstretched arms and legs and three-dimensional shapes as they created the architectural covered nest at the start, mid-way and at the conclusion of the dance.
Conclusion

The evidence presented in this paper indicates that children demonstrate embodied spatial thinking and spatial visualisation during improvisational dances. This has been demonstrated by highlighting: (1) the position of the dancer and the dance props in the space; (2) lines and angles in children’s body shapes; (3) spatial movement; (4) high and low body shapes; (5) direction of travel; (6) rotation around an axis; and (7) the creation of two- and three-dimensional body shapes. Body thinking and learning are evidenced to include a distinctive orientation towards a range of mathematical explorations that reflect developing mathematical understanding. The inclusion of dance in early childhood curricula, when free body movement affords opportunities for children’s open-ended exploration of space, force, time and flow (Laban, 1963), provides the young child with opportunities for expressive and dynamic mathematical communication.

Importantly, educators’ purposeful observation and recognition of children’s embodied spatial thinking provides opportunities for conversations with children which prompt children to engage in higher order thinking to explain their dancing and their thinking. In turn, this creates opportunities for educators to make connections with other concepts, to make connections with the child’s previous learning and to plan contingent learning experiences that facilitate the expansion of the child’s knowledge to other learning areas. The cyclical and emergent nature of teaching and learning in early childhood demands sensitivity to the young child’s predisposition for multi-modal learning and diverse communication styles. Through the adoption of an integrated teaching and learning approach, the early childhood teacher can acknowledge the young child’s capacity to make meaning through a range of modalities and, in so doing, make the learning journey more authentic and meaningful.

References


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Introduction

Despite its intrinsic rewards, high value to families and important role in society, early childhood education and care (ECEC) practice is beset by societal disrespect, poor compensation and poor working conditions (Andrew & Newman, 2012). While work that is challenging and rewarding with appropriate social support can promote the wellbeing of workers, there is strong, prospective evidence that poor psychosocial working conditions diminish worker mental health and can cause anxiety and depression (LaMontagne & Keegel, 2012; LaMontagne, Keegel, Louie & Ostry, 2010). Relatively little attention has been given to the mental health and wellbeing of the childcare workforce, nor its relationships with working conditions. All ECEC work includes conditions that can be testing; however, for family day care (FDC) educators, conditions such as isolation and small business operation can be particularly difficult. This research aims to characterise the relationships between FDC educator working conditions and their mental health and wellbeing. It focuses on modifiable working conditions so as to provide information to guide workplace mental health promotion intervention.

In Australia, FDC educators provide a paid childcare service, alone in their own home for up to four children under five years old (and an additional three children aged under 12 years before and after school hours). Most FDC educators operate as ‘own-account’ small business owners (Louie et al., 2006) and are contracted to government-regulated FDC coordination schemes. A recent surge in FDC numbers means there are now more than 14 000 FDC educators, predominately women, providing child care for around 135 000 children in Australia (The Social Research Centre, 2014). To meet new national ECEC reforms (the first National Quality Framework for ECEC commenced in 2012), FDC educators now work to the same standards and framework as centre-based care (CBC) settings and include formal qualifications (COAG, 2009).
Government investment and international policy concerning ECEC educators often targets training and qualifications with dual aims of supporting higher care quality and better outcomes for children, the major foci of ECEC. Largely absent from these efforts is the promotion of conditions that facilitate educator mental health and wellbeing despite growing evidence of the associations between higher quality care (interactions, educator attitudes towards children) and better educator mental health in FDC and CBC settings (Corr, Davis, LaMontagne, Waters & Steele, 2014). Instead, concerns about educator wellbeing, job stress and turnover have led to individually targeted advice to changing educators’ perceptions and attitudes (Wagner et al., 2013) and increasing self-management and care. However, promoting educator mental health and wellbeing by modifying working conditions and the systems that shape them is likely to be a more effective way to support a high-quality, sustainable workforce (LaMontagne, Keegel & Vallance, 2007).

Educator mental health appears to play an important role in ECEC provision; however, the extent of poor mental health and of mental wellbeing in the childcare workforce is largely unknown. In a review (1980–2012) of the five published studies that measure ECEC providers’ mental health and wellbeing, estimates of poor mental health were highly variable (Corr et al., 2014). Between six and 27 per cent of educators who participated in cross-sectional surveys were classified as having clinically significant symptoms of depression (Curbow, McDonnell, Spratt, Griffin & Agnew, 2003; Gerber, Whitebook & Weinstein, 2007; Hamre & Pianta, 2004; Weaver, 2002). Mental wellbeing was measured in two studies of childcare providers (one in FDC, \( n = 65 \); one in CBC, \( n = 190 \)), with mean scores indicating high mental wellbeing (Kaiser, Rogers & Kasper, 1993; Weaver, 2002). The limited research to date has been exclusively in American cross-sectional samples, most of which did not measure or provide separate prevalence figures for FDC educators. Given the limited data available, baseline prevalence data of FDC educators’ mental health—both mental wellbeing and psychological distress—is needed to inform evidence-based policy, practice and workplace mental health promotion interventions. However, it is not only the status of educators’ mental health that is important, but the conditions that promote, protect or risk their mental health and wellbeing. As job stress and psychosocial working conditions are highly influential for workers’ mental health (LaMontagne et al., 2010), understanding the relationships between FDC educators’ work and wellbeing is critical to supporting a high-quality workforce.

Like other ECEC work, FDC work features high demands, intense emotional work (Hochschild, 2012) and low pay; however, for FDC educators, further strain may arise due to isolation and the precarious nature of small business operation (Gerstenblatt, Faulkner, Lee, Doan & Travis, 2014). At the same time, the rewards of working with children and the features of small business ownership that encourage autonomy may promote FDC educators’ mental wellbeing. Research into the relationship between educator mental health and wellbeing and working conditions holds promise as many working conditions are modifiable and evidence can be integrated into context-specific workplace mental health promotion interventions at the policy, organisation and practice levels. Qualitative studies have indicated that the mental health of FDC educators is put at risk by stress arising from financial insecurity, isolation, difficult interactions with parents, caring for children at risk or with additional needs, a lack of entitlements (e.g. sick leave), disrespect for FDC work and the effect of policies created by government and by educators for use in their services (Butler & Modaff, 2008; Gerstenblatt et al., 2014; Groeneveld, Vermeer, van Ijzendoorn & Linting, 2012; Mclnnes, Ward & Knight, 2010; Rusby, Jones, Crowley & Smolkowski, 2012). Social and emotional rewards and support (Curbow et al., 2003; Kontos & Riessen, 1983; Weaver, 2002) as well as practical support for FDC work (Weaver, 2002) have been associated with better educator mental health. While a range of occupational health and safety risks in child care has been described in ECEC (McGrath, 2007; McGrath & Huntington, 2007), the quantitative relationships between working conditions and mental health and wellbeing have rarely been examined—and never in depth. Furthermore, research has scarcely been extended to include job stress (Curbow, Spratt, Ungaretti, McDonnell & Breckler, 2000) or psychosocial working conditions that are likely to play a role in educator mental health. This study provides evidence on the mental health status of Australian FDC educators and of associations between educator mental health and wellbeing and FDC working conditions to inform policy, planning and practice responses.

The following questions were addressed in this study:

1. What is the prevalence of psychological distress and mental wellbeing in FDC educators?
2. What is the prevalence of different working conditions in FDC that may be relevant to educator mental health?
3. How are working conditions in FDC related to educators’ psychological distress and mental wellbeing?

**Method**

**Data**

This cross-sectional study used data from the 2012 *Work and Wellbeing in Family Day Care* study that aimed to develop an evidence base for workplace mental health promotion in FDC. The project was approved by the University of Melbourne Human Research Ethics Committee (HREC 1237396.1). A random sample of FDC educators (\( n = 1958 \)) from Victoria and Queensland and registered with Family Day Care Australia (FDCA) was invited to participate in data collection by mail or email,
depending on their registered contact details; 395 (~50 per cent Queensland and 50 per cent Victoria) consented and were subsequently included (response rate 20 per cent). The survey was designed after discussions with FDC schemes, educators and FDCA, as well as a preliminary analysis of the componentative question of the Work and Wellbeing in Family Day Care study. It was piloted with FDC educators to check interpretation, acceptability and feasibility. The first section collected information on participant sociodemographic characteristics and the second section on job and client characteristics. The final section measured ‘work and wellbeing’, asking about sickness absences and working when sick, self-rated health, job stress, social support, practical support, psychological distress and mental wellbeing. To reduce social desirability bias and disclosure risks for educators, surveys were anonymous.

**Measures**

**Mental health**

The Kessler 10 (K10) was used to assess symptoms of general psychological distress experienced in the past four weeks. Participants respond using a five-point scale (all of the time, most of the time, a little of the time, none of the time); total scores can range from 10 (no distress) to 50 (severe distress). It is an efficient, widely used screening instrument with strong validity and reliability (Andrews & Slade, 2001). Mental wellbeing was assessed using the Warwick–Edinburgh Mental Health and Wellbeing Scale (WEMHWBS), a 14-item scale that measures population mental wellbeing (psychological—eudaimonic and hedonic wellbeing—affect) in the past two weeks (Stewart-Brown et al., 2009). It has been found to have strong validity and reliability and low social desirability bias in student and population studies (Tennant et al., 2007). All items are positively worded and provide five response options on a Likert scale (never, rarely, some of the time, often, all of the time); higher scores indicate greater mental wellbeing. The seven-item short form (SWEMHWBS) was used in this survey. It has the same response options; total scores range from seven to 35. The SWEMHWBS is superior to the 14-item scale as it meets strict Rasch model criteria and is largely without gender and age bias (Stewart-Brown et al., 2009).

**Effort–Reward Imbalance**

Psychosocial working conditions were primarily measured using the short form of the Effort–Reward Imbalance measure (ERI) which is an effective, reliable and valid measurement tool (Leineweber et al., 2010; Siegrist, Wege, Pühlofer & Währrendorf, 2009). It consists of three scales: ‘effort’ (three questions, score: ≥12), ‘rewards’ (seven questions, score: ≥28) and ‘overcommitment’ (six questions, score: ≥24) which represents an inability to withdraw from work. The 16 questions are answered using a four-point Likert scale (1 = strongly disagree to 4 = strongly agree).

Given the relevance of esteem to this population (Butler & Modaff, 2008; Rusby et al., 2012), three subscales of the rewards scale were also used: ‘esteem’ (respect) (score range 2–8), ‘job promotion prospects’ (score range 3–12) and ‘job security’ (score range 2–8). Scales and the ERI ratio were calculated according to ERI protocol (Leineweber et al., 2010; Siegrist et al., 2009). A ratio greater than one indicates a lack of reciprocity, where greater effort is expended than rewards received (Radi, Ostry & LaMontagne, 2007).

**Social support**

A modified four-item social support scale was used to assess supervisory and collegial support (response options: often, rarely, sometimes or never) (Johnson & Hall, 1988). Questions ask about access to ‘instrumental’ (i.e. help and support) and ‘socioemotional’ (listening to work-related problems) support from supervisors and colleagues. ‘Supervisor’ was changed to read ‘field worker or coordination scheme’ and colleagues to ‘other educators’. A total support score was calculated by summing the four item scores (Pelfrene et al., 2001).

**Statistical analysis**

Data were analysed using Stata V.12.0 (StataCorp LP, College Station, Texas, USA). Cases without data for the working conditions and mental health survey sections were removed (n = 18). No differences were found between sociodemographic characteristics of educators who did or did not complete data collection. Data were checked for normality. K10 scores were recoded as a binary variable due to severe skewness (>15 low psychological distress; ≥15 moderate to high psychological distress) (Kessler et al., 2002). For regression analysis, health (very poor, poor, fair vs good, excellent), fee payment type (collect own fees vs fees collected by schemes), intention to stay in FDC and education (high school or lower vs vocational, tertiary) were reduced to two categories. A practical support item was generated by summing access to toy library, equipment loans and playgroups. Results were considered statistically significant at p < 0.05.

**Results**

The descriptive characteristics of participants in this study are shown in Table 1.

These results describe a workforce in flux; around half the educators did not plan to stay in FDC beyond five years and a third had thought of leaving FDC in the last month (Table 2). Job security measures demonstrated that just over half of the educators felt their jobs were secure and the majority of educators felt that they would have some difficulty getting another job with the same pay and hours. The mean ERI ratio indicated an imbalance of effort expended to rewards received and 8.6 per cent (n = 26) of educators had a ratio indicating greater rewards than effort.
Table 1. Characteristics of FDC educators and their services (n = 366)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex, n (%)</strong></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>361 (99)</td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
</tr>
<tr>
<td>Mean ± SD*</td>
<td>47.3 ± 11.2</td>
</tr>
<tr>
<td><strong>Place of birth, n (%)</strong></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>250 (68.3)</td>
</tr>
<tr>
<td><strong>Identify as Aboriginal or Torres Strait Islander, n (%)</strong></td>
<td>1 (&gt;1)</td>
</tr>
<tr>
<td><strong>Language spoken at home, n (%)</strong></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>293 (80.1)</td>
</tr>
<tr>
<td><strong>Location, n (%)</strong></td>
<td></td>
</tr>
<tr>
<td>Victoria</td>
<td>176 (48.1)</td>
</tr>
<tr>
<td>Queensland</td>
<td>185 (50.8)</td>
</tr>
<tr>
<td>Other</td>
<td>3 (0.8)</td>
</tr>
<tr>
<td><strong>Education, n (%)</strong></td>
<td></td>
</tr>
<tr>
<td>Less than Year 12</td>
<td>61 (16.8)</td>
</tr>
<tr>
<td>Year 12 or equivalent</td>
<td>32 (8.8)</td>
</tr>
<tr>
<td>Technical college certificate</td>
<td>143 (39.4)</td>
</tr>
<tr>
<td>Diploma or equivalent</td>
<td>98 (26.8)</td>
</tr>
<tr>
<td>Bachelor degree</td>
<td>19 (5.2)</td>
</tr>
<tr>
<td>Postgraduate degree</td>
<td>10 (2.8)</td>
</tr>
<tr>
<td><strong>Study enrolment status, n (%)</strong></td>
<td></td>
</tr>
<tr>
<td>Currently studying</td>
<td>95 (26.5)</td>
</tr>
<tr>
<td>Of those currently studying:</td>
<td></td>
</tr>
<tr>
<td>Certificate III Children’s Services</td>
<td>52 (56)</td>
</tr>
<tr>
<td>Diploma/Adv. Diploma Children’s Services</td>
<td>32 (34.5)</td>
</tr>
<tr>
<td>University—Early Childhood</td>
<td>5 (5.4)</td>
</tr>
<tr>
<td><strong>Scheme funding type, n (%)</strong></td>
<td></td>
</tr>
<tr>
<td>Local government</td>
<td>136 (39)</td>
</tr>
<tr>
<td>Private</td>
<td>112 (32.1)</td>
</tr>
<tr>
<td>Not-for-profit</td>
<td>88 (25.2)</td>
</tr>
<tr>
<td>Other</td>
<td>13 (3.7)</td>
</tr>
<tr>
<td><strong>Employment type, n (%)</strong></td>
<td></td>
</tr>
<tr>
<td>Contractor</td>
<td>309 (86.6)</td>
</tr>
<tr>
<td>Employee</td>
<td>48 (13.4)</td>
</tr>
<tr>
<td><strong>Years working in FDC, mean ± SD</strong></td>
<td>10.4 ± 9.1</td>
</tr>
<tr>
<td><strong>Working hours, mean ± SD</strong></td>
<td></td>
</tr>
<tr>
<td>Paid</td>
<td>45.3 ± 27.5</td>
</tr>
<tr>
<td>Unpaid</td>
<td>10.3 ± 13.4</td>
</tr>
<tr>
<td><strong>Work overnight and/or weekend, n (%)</strong></td>
<td>84 (23.3)</td>
</tr>
<tr>
<td><strong>No. of children attending FDC weekly, mean (range)</strong></td>
<td>8 (1–27)</td>
</tr>
<tr>
<td><strong>Health status, n (%)</strong></td>
<td></td>
</tr>
<tr>
<td>Very poor</td>
<td>2 (&gt;1)</td>
</tr>
<tr>
<td>Poor</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Fair</td>
<td>43 (11.8)</td>
</tr>
<tr>
<td>Good</td>
<td>206 (56.4)</td>
</tr>
<tr>
<td>Excellent</td>
<td>114 (31.2)</td>
</tr>
<tr>
<td><strong>Taken time off work due to illness in last four weeks, n (%)</strong></td>
<td>53 (14.6)</td>
</tr>
<tr>
<td><strong>Worked unwell in last four weeks, n (%)</strong></td>
<td>118 (32.2)</td>
</tr>
<tr>
<td><strong>Number of days worked unwell in last four weeks, mean ± SD</strong></td>
<td>5 (±SD 5.36)</td>
</tr>
<tr>
<td>Own child/children attends FDC service, n (%)</td>
<td>90 (25.4)</td>
</tr>
<tr>
<td><strong>Child age range in FDC service, mean ± SD (range)</strong></td>
<td>23 months (±SD 22.2) –7.75 years (±3.6)</td>
</tr>
<tr>
<td>Children with a disability or developmental delay, n (%)</td>
<td>85 (36)</td>
</tr>
<tr>
<td>Children with a serious health problem, n (%)</td>
<td>31 (15)</td>
</tr>
<tr>
<td>Parent clients with mental illness or substance abuse problem, n (%)</td>
<td>25 (12.7)</td>
</tr>
</tbody>
</table>

* SD = Standard deviations

Table 2. Descriptive characteristics of participants’ family day care motivations, future plans, job security and income security

<table>
<thead>
<tr>
<th>Descriptive characteristics</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reason(s) for becoming an educator</strong></td>
<td></td>
</tr>
<tr>
<td>It suited me to work from home as I had my own child/children at home</td>
<td>223 (60.9)</td>
</tr>
<tr>
<td>I enjoy working with children</td>
<td>264 (72.1)</td>
</tr>
<tr>
<td>I like the idea of working from home</td>
<td>142 (38.8)</td>
</tr>
<tr>
<td>I wanted to run my own business</td>
<td>79 (21.6)</td>
</tr>
<tr>
<td>It lets me decide my hours of work</td>
<td>129 (35.2)</td>
</tr>
<tr>
<td>To work with children in a non-centre-based environment</td>
<td>97 (26.5)</td>
</tr>
<tr>
<td>To work from home while completing other study</td>
<td>27 (7.4)</td>
</tr>
<tr>
<td>Suited my career development plan</td>
<td>30 (8.2)</td>
</tr>
<tr>
<td>Other family reasons</td>
<td>7 (1.9)</td>
</tr>
</tbody>
</table>
Descriptive characteristics

<table>
<thead>
<tr>
<th></th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plan to stay in FDC</strong></td>
<td></td>
</tr>
<tr>
<td>Under 12 months</td>
<td>16 (4.5)</td>
</tr>
<tr>
<td>1–2 years</td>
<td>66 (18.5)</td>
</tr>
<tr>
<td>3–5 years</td>
<td>95 (26)</td>
</tr>
<tr>
<td>6–10 years</td>
<td>89 (25)</td>
</tr>
<tr>
<td>More than 10 years</td>
<td>90 (25.3)</td>
</tr>
<tr>
<td><strong>Thought of leaving FDC in last month</strong></td>
<td></td>
</tr>
<tr>
<td>Once</td>
<td>13 (12.4)</td>
</tr>
<tr>
<td>2–4 times</td>
<td>53 (50.5)</td>
</tr>
<tr>
<td>Five times or more</td>
<td>39 (37.1)</td>
</tr>
<tr>
<td><strong>How secure in future of FDC?</strong></td>
<td></td>
</tr>
<tr>
<td>Not at all secure</td>
<td>22 (11.5)</td>
</tr>
<tr>
<td>Moderately secure</td>
<td>68 (35.4)</td>
</tr>
<tr>
<td>Secure</td>
<td>71 (37)</td>
</tr>
<tr>
<td>Extremely secure</td>
<td>31 (16.1)</td>
</tr>
<tr>
<td><strong>If stop FDC, difficulty getting another job</strong></td>
<td></td>
</tr>
<tr>
<td>Not at all difficult</td>
<td>67 (18.6)</td>
</tr>
<tr>
<td>Moderately difficult</td>
<td>105 (29.2)</td>
</tr>
<tr>
<td>Difficult</td>
<td>99 (27.5)</td>
</tr>
<tr>
<td>Extremely difficult</td>
<td>89 (24.7)</td>
</tr>
<tr>
<td><strong>Income adequacy</strong></td>
<td></td>
</tr>
<tr>
<td>Not enough to meet your needs</td>
<td>107 (29.5)</td>
</tr>
<tr>
<td>Enough to meet your needs</td>
<td>234 (64.5)</td>
</tr>
<tr>
<td>More than enough to meet your needs</td>
<td>22 (6.1)</td>
</tr>
<tr>
<td><strong>Outstanding fees followed up</strong></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>88 (24.2)</td>
</tr>
<tr>
<td>Sometimes</td>
<td>179 (49.3)</td>
</tr>
<tr>
<td>Often</td>
<td>87 (24)</td>
</tr>
<tr>
<td>Not applicable, my scheme collects the whole fee from parents</td>
<td>9 (2.5)</td>
</tr>
<tr>
<td><strong>Access to toy library</strong></td>
<td>243 (66.4)</td>
</tr>
<tr>
<td><strong>Access to equipment loans</strong></td>
<td>242 (69.6)</td>
</tr>
<tr>
<td><strong>Access to playgroups</strong></td>
<td>272 (76.2)</td>
</tr>
<tr>
<td><strong>Social support measure</strong></td>
<td>13.02 (±SD 2.47)</td>
</tr>
<tr>
<td><strong>Effort–reward imbalance measure</strong></td>
<td></td>
</tr>
<tr>
<td>Effort</td>
<td>8.47 (±SD 2.02)</td>
</tr>
<tr>
<td>Overcommitment</td>
<td>14.86 (±SD 3.73)</td>
</tr>
<tr>
<td>Reward</td>
<td>16.44 (±SD 16.44)</td>
</tr>
<tr>
<td>Esteem</td>
<td>3.95 (±SD 1.39)</td>
</tr>
<tr>
<td>Job security</td>
<td>5.32 (±SD 1.47)</td>
</tr>
<tr>
<td>Promotion prospects</td>
<td>7.17 (±SD 1.23)</td>
</tr>
<tr>
<td>Effort–reward ratio</td>
<td>1.22 (±SD 0.35)</td>
</tr>
</tbody>
</table>

*Multiple responses allowed, numbers will not add up to 100 per cent

**Educator mental health**

Educators completing the K10 (n = 338) had a mean score of 15.2 (±SD 5.62), a median of 14 (range 10–50), with 58.3 per cent of respondents (n = 197) scoring under 15. This indicates that while many participants did not report having experienced poor mental health in the past month, 41.7 per cent had experienced moderate to severe levels of psychological distress. The distribution is heavily skewed (skew 2.0) and the majority of people report little or no distress, which is consistent with Australian population data of the K10 and other measures of psychological distress (Andrews & Slade, 2001). Mental wellbeing scores, measured by the SWEMHWBS, also indicated that most educators have moderate wellbeing with a mean score of 27.12 (±SD 4.56) and a median score of 27 (experienced indicators of mental wellbeing ‘some of the time’ and ‘often’).

**Multivariable analysis**

Unpaid, paid and irregular work hours and the number of children cared for each week were not associated with educator mental health outcomes and are not reported in Tables 3 or 4.

**Psychological distress**

Table 3 presents the results of multiple logistic regression analyses between moderate to severe psychological distress and working conditions. Unadjusted logistic regressions showed that caring for a child/children with a disability or developmental delay was associated with reduced odds of distress. However, lack of job security and working for children and families with problems such as parent substance abuse were associated with increased risk of distress. On the ERI measure, educators reporting higher overcommitment, effort, low promotion prospects and a higher ERI ratio had increased odds of distress. After adjusting for confounders there was strong evidence that educators working with children and/or parents with additional needs, or who had insufficient incomes to meet their needs, had higher odds of reporting distress. Further, ‘overcommitment’, ‘effort’ and ‘esteem’ had significant (p < 0.001) positive relationships to distress. Multivariable logistic regression modelling showed that the odds of distress were 5.34-fold higher in educators who reported a higher ERI ratio.

**Mental wellbeing**

The results of linear regressions with mental wellbeing and working conditions are presented in Table 4. Univariate analysis showed that caring for your own child in FDC or a child/children with a disability or developmental delay, and the areas of social support and job security, were associated with higher educator mental wellbeing. Negative associations with mental wellbeing were found for educators that had to follow up fees with parents,
felt their jobs weren’t secure and felt that finding a new, equivalent job would be difficult. On the ERI scales, negative associations were found between educator mental wellbeing and educators reporting higher overcommitment and effort and lower esteem and ERI ratio. After adjusting for age, health status, education and language spoken at home, social support and job security had significant, positive associations with educator mental wellbeing. Job stressors of overcommitment, effort and esteem were significantly associated with decreased mental wellbeing. The strongest relationship was between mental wellbeing and ERI ratio: for every unit increase in the ERI ratio, mental wellbeing decreased by 2.3 points on the SWEMHWBS (95 per cent Confidence Interval [CI] 3.33 to 1.29). Social support remained significantly related to higher mental wellbeing after multiple adjustments (Model 3).

Discussion

This study demonstrates that FDC educator mental health is a key issue for the ECEC sector. The findings provide baseline information of the mental health status and working conditions of FDC educators and highlight the crucial role of psychosocial working conditions in the promotion and protection of educator mental health in FDC. As the vast majority of educators had imbalanced effort–reward ratios, these results call to question the fairness of the ‘rewards’ that educators receive in exchange for the effort they expend, particularly esteem, income and job security. They also highlight the role of social support in promoting educators’ mental health. Findings can be used to inform ECEC policy, practice or research interventions in workplace mental health promotion.

Table 3. Crude and multivariate odds ratios for FDC working conditions and educator psychological distress

<table>
<thead>
<tr>
<th>Working conditions</th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
<th>Model 3</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR</td>
<td>95% CI</td>
<td>p-value</td>
<td>AOR</td>
<td>95% CI</td>
<td>p-value</td>
<td>AOR</td>
<td>95% CI</td>
<td>p-value</td>
</tr>
<tr>
<td>Own child in FDC service</td>
<td>0.54</td>
<td>0.33 to 0.89</td>
<td>0.016</td>
<td>0.79</td>
<td>0.43 to 1.43</td>
<td>0.429</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child/children with disability/developmental delay</td>
<td>0.42</td>
<td>0.24 to 0.75</td>
<td>0.003</td>
<td>0.49</td>
<td>0.26 to 0.93</td>
<td>0.030</td>
<td>0.68</td>
<td>0.17 to 2.62</td>
<td>0.577</td>
</tr>
<tr>
<td>Children/families with additional needs/problems</td>
<td>1.64</td>
<td>1.04 to 2.58</td>
<td>0.031</td>
<td>1.73</td>
<td>1.05 to 2.83</td>
<td>0.030</td>
<td>1.68</td>
<td>0.46 to 6.10</td>
<td>0.429</td>
</tr>
<tr>
<td>Income does not meet needs</td>
<td>1.55</td>
<td>0.96 to 2.51</td>
<td>0.069</td>
<td>1.95</td>
<td>1.15 to 3.29</td>
<td>0.013</td>
<td>0.49</td>
<td>0.17 to 1.39</td>
<td>0.179</td>
</tr>
<tr>
<td>Need to follow up fee payments</td>
<td>1.22</td>
<td>0.73 to 2.03</td>
<td>0.453</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of days worked when unwell in the last month</td>
<td>1.02</td>
<td>0.94 to 1.10</td>
<td>0.616</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How secure FDC job</td>
<td>1.94</td>
<td>1.03 to 3.67</td>
<td>0.042</td>
<td>1.78</td>
<td>0.91 to 3.47</td>
<td>0.093</td>
<td>0.82</td>
<td>0.28 to 2.39</td>
<td>0.711</td>
</tr>
<tr>
<td>Ease in finding new job</td>
<td>1.16</td>
<td>0.66 to 2.04</td>
<td>0.607</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social support scale</td>
<td>0.95</td>
<td>0.87 to 1.04</td>
<td>0.309</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practical support</td>
<td>0.99</td>
<td>0.61 to 1.61</td>
<td>0.972</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effort–reward imbalance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overcommitment</td>
<td>1.24</td>
<td>1.15 to 1.33</td>
<td>0.000</td>
<td>1.24</td>
<td>1.15 to 1.34</td>
<td>0.000</td>
<td>1.22</td>
<td>1.05 to 1.41</td>
<td>0.007</td>
</tr>
<tr>
<td>Effort scale</td>
<td>1.39</td>
<td>1.23 to 1.58</td>
<td>0.000</td>
<td>1.40</td>
<td>1.22 to 1.61</td>
<td>0.000</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Reward scale</td>
<td>0.82</td>
<td>0.75 to 0.89</td>
<td>0.000</td>
<td>0.81</td>
<td>0.73 to 0.89</td>
<td>0.000</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Esteem subscale</td>
<td>0.74</td>
<td>0.62 to 0.87</td>
<td>0.000</td>
<td>0.77</td>
<td>0.64 to 0.92</td>
<td>0.005</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Job security subscale</td>
<td>0.78</td>
<td>0.67 to 0.91</td>
<td>0.002</td>
<td>0.73</td>
<td>0.62 to 0.87</td>
<td>0.001</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Promotion subscale</td>
<td>0.73</td>
<td>0.60 to 0.89</td>
<td>0.002</td>
<td>0.70</td>
<td>0.56 to 0.88</td>
<td>0.002</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Effort–reward ratio</td>
<td>3.69</td>
<td>2.24 to 6.07</td>
<td>0.000</td>
<td>4.19</td>
<td>2.40 to 7.30</td>
<td>0.000</td>
<td>5.34</td>
<td>1.66 to 17.16</td>
<td>0.005</td>
</tr>
</tbody>
</table>

OR = Odds Ratio; AOR = Adjusted Odds Ratio; 95% CI = 95% Confidence Interval; p-value demonstrates the significance of results, > 0.05 indicates likely significance (e.g. p = 0.000 indicates very high significance)

Covariates Model 1: none
Covariates Model 2: age, education, health status, English primary language spoken at home
Covariates Model 3: As model 2, mutually adjusted for significant predictors (p > 0.1) excluding ERI variables effort, reward, esteem, job security and promotion. R² = 27 per cent
Educators in this sample had, on the whole, reasonable mental health with psychological distress and mental wellbeing scores that were comparable to adult population means (Andrews & Slade, 2001; Chanfreau et al., 2008). However, a notable proportion of educators experienced significant emotional distress in the past month and this group of educators is likely to benefit from appropriate mental health support. Despite experiences of mental wellbeing, the challenging psychosocial working conditions, namely a lack of reciprocity between the efforts they expend and the rewards they receive, may underlie the common instances of psychological distress.

### Table 4. Unadjusted and adjusted linear regression of educator mental wellbeing and working conditions

<table>
<thead>
<tr>
<th>Working conditions</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own child in FDC service</td>
<td>1.43</td>
<td>0.32 to 2.54</td>
<td>0.012</td>
<td>0.70</td>
<td>–0.50 to 1.89</td>
<td>0.253</td>
</tr>
<tr>
<td>Child/children with disability/developmental delay</td>
<td>1.51</td>
<td>0.30 to 2.72</td>
<td>0.014</td>
<td>1.04</td>
<td>–0.23 to 2.32</td>
<td>0.109</td>
</tr>
<tr>
<td>Children/families with additional needs/problems</td>
<td>–0.88</td>
<td>–1.89 to 0.13</td>
<td>0.088</td>
<td>–0.98</td>
<td>–1.98 to 0.01</td>
<td>0.053</td>
</tr>
<tr>
<td>Income not enough to meet needs</td>
<td>–0.72</td>
<td>–1.81 to 0.36</td>
<td>0.189</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Need to follow up fee payments</td>
<td>–1.51</td>
<td>–2.64 to 0.38</td>
<td>0.009</td>
<td>–1.49</td>
<td>–2.58 to 0.04</td>
<td>0.007</td>
</tr>
<tr>
<td>Number of days worked when unwell in the last month</td>
<td>–0.13</td>
<td>–0.29 to 0.31</td>
<td>0.119</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How secure FDC job</td>
<td>–1.96</td>
<td>–3.19 to 0.73</td>
<td>0.002</td>
<td>–1.50</td>
<td>–2.72 to 0.28</td>
<td>0.017</td>
</tr>
<tr>
<td>Ease in finding new job</td>
<td>–1.21</td>
<td>–2.44 to 0.02</td>
<td>0.054</td>
<td>–1.39</td>
<td>–2.58 to 0.20</td>
<td>0.022</td>
</tr>
<tr>
<td>Social support scale</td>
<td>0.47</td>
<td>0.28 to 0.66</td>
<td>0.000</td>
<td>0.43</td>
<td>0.24 to 0.61</td>
<td>0.000</td>
</tr>
<tr>
<td>Practical support</td>
<td>0.13</td>
<td>–0.98 to 1.23</td>
<td>0.822</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effort–reward imbalance</td>
<td>–0.50</td>
<td>–0.62 to 0.38</td>
<td>0.000</td>
<td>–0.47</td>
<td>–0.59 to 0.35</td>
<td>0.000</td>
</tr>
<tr>
<td>Effort scale</td>
<td>–0.70</td>
<td>–0.94 to 0.46</td>
<td>0.000</td>
<td>–0.66</td>
<td>–0.90 to 0.42</td>
<td>0.000</td>
</tr>
<tr>
<td>Reward scale</td>
<td>0.56</td>
<td>0.39 to 0.73</td>
<td>0.000</td>
<td>0.52</td>
<td>0.34 to 0.69</td>
<td>0.000</td>
</tr>
<tr>
<td>Esteem subscale</td>
<td>1.02</td>
<td>0.68 to 1.35</td>
<td>0.000</td>
<td>0.81</td>
<td>0.48 to 1.15</td>
<td>0.000</td>
</tr>
<tr>
<td>Job security subscale</td>
<td>0.77</td>
<td>0.44 to 1.10</td>
<td>0.000</td>
<td>0.79</td>
<td>0.46 to 1.12</td>
<td>0.000</td>
</tr>
<tr>
<td>Promotion subscale</td>
<td>0.65</td>
<td>0.21 to 1.10</td>
<td>0.004</td>
<td>0.62</td>
<td>0.20 to 1.05</td>
<td>0.004</td>
</tr>
<tr>
<td>Effort–reward ratio</td>
<td>–3.21</td>
<td>–4.05 to 2.37</td>
<td>0.000</td>
<td>–3.04</td>
<td>–3.90 to 2.18</td>
<td>0.000</td>
</tr>
</tbody>
</table>

β Coe = β Coefficient; OR = Odds Ratio; AOR = Adjusted Odds Ratio; 95% CI = 95% Confidence Interval; p-value demonstrates the significance of results, > 0.05 indicates likely significance (e.g. p = 0.000 indicates very high significance)

Covariates Model 1: none
Covariates Model 2: age, education, health status, English primary language spoken at home
Covariates Model 3: As model 2, excluding ERI variables effort, reward, esteem, job security and promotion. Pseudo R² = 25 per cent

### FDC educator mental health

Educators in this sample had, on the whole, reasonable mental health with psychological distress and mental wellbeing scores that were comparable to adult population means (Andrews & Slade, 2001; Chanfreau et al., 2008). However, a notable proportion of educators experienced significant emotional distress in the past month and this group of educators is likely to benefit from appropriate mental health support. Despite experiences of mental wellbeing, the challenging psychosocial working conditions, namely a lack of reciprocity between the efforts they expend and the rewards they receive, may underlie the common instances of psychological distress.

### Work-related insecurity

Financial insecurity, from having to chase up fees from parents and having an inadequate income, was a problem for many educators, associated with higher odds of psychosocial distress and lower mental wellbeing. Job stress may arise from not only the financial insecurity of unpaid fees, but also the strained relationships that may result from having to ask parents to pay.

### Child and family characteristics

For educators caring for children with a disability or developmental delay, the odds of having moderate to severe psychological distress were decreased by as much as 51 per cent.
compared with those who did not care for children with these characteristics (Table 3, Models 1 and 2). This evidence stands in contrast to that of research into the mental health of parents of a child/children with a disability, where an elevated risk of depression in parents is consistently reported (Singer & Floyd, 2006). As the cross-sectional study design precludes causality, these findings may represent the rewards from caring for children with additional needs, or that educators who choose to care for children with a disability or developmental delay have better mental health at the outset. Working with parents that have mental health or substance abuse problems, or other problems, was associated with poorer mental wellbeing, though this effect disappeared after adjustments. Caring for your own child in FDC was a motivation for commencing FDC for around 60 per cent of educators in this study and was associated with better mental health outcomes in univariable regression analyses. This finding highlights how fulfilling parenting wishes or needs while earning an income through FDC (Community Services and Health Industry Skills Council, June, 2011; Nelson, 1988) can aid in supporting educator’s mental health.

Practical and social support

While practical support was not significantly associated with mental health outcomes, social support was found to be related to mental wellbeing but not psychological distress. In ECEC literature from FDC (Kontos & Riessen, 1993), CBC (Ghazvini & Mullis, 2002) and combined FDC and CBC studies (Curbow et al., 2003), social support was found to be related to fewer depressive symptoms in educators. However, the relationship between mental wellbeing and social support was not measured.

Effort–Reward Imbalance

An imbalance of effort expended and rewards received was common in this population, as was overcommitment. Consistent with previous ERI research, an imbalanced ERI ratio was associated with higher odds of poor mental health (Stansfeld & Candy, 2006); in this instance, the odds of psychological distress were increased 5.34-fold. “Rewards”, both before and after adjustments and modelling, were significantly associated with reduced odds of psychological distress. To our knowledge, the ERI measure has not been tested against mental wellbeing. In this study, ERI ratio was related to worse mental wellbeing and rewards to better wellbeing. Job security and promotion items were associated with better mental health outcomes. Due to the high demand for ECEC providers, job security is not commonly examined in the ECEC literature; however, it has been noted that job promotion opportunities are scarce in the field (Doherty, Lero, Goelman, LaGrange & Tougas, 1999). This is particularly the case in FDC, where an educator must close their small business and change occupations to be promoted. Higher esteem was found to be protective of educator mental health in this study—supported by ECEC and FDC literature—which has documented perceived lack of esteem and respect from others (supervisors, community, society) as a key stressor and concern (Butler & Modaff, 2008; Rutman, 1996).

Limitations

The study sample is representative of the Australian population of FDC educators on markers of gender, average age, proportion of educators born in Australia and average job tenure (Community Services and Health Industry Skills Council, June, 2011; Williamson, Davis, Priest & Harrison, 2011). However, caution should be exercised when generalising these findings to the total FDC population due to the response rate. This survey was distributed at the peak of changes resulting from national ECEC reforms, which resulted in educators being under additional time pressure, hence the 20 per cent response rate was lower than hoped, though not unusual in FDC research (O’Connor & Temple, 2005). This timing may also mean that psychological distress and job stress responses are inflated. However, as the second study ever to measure psychosocial job stress in ECEC educators (Curbow et al., 2000) and the only study to use an extensively tested, theoretically sound, valid, reliable and comparable measure (ERI), it contributes timely and requisite knowledge for practice and policy responses (Siegrist, 1996; Siegrist et al., 2009). Lastly, multiple adjustments and predictors were analysed in multiple regressions, which can increase the risk of false positives but allowed a comprehensive assessment of associations between working conditions and educator mental health.

Conclusions

The mental health and wellbeing of FDC educators is an overlooked, yet fundamental part of supporting a sustainable and high-quality workforce. In this study, the average educator’s mental health was of moderate quality; however, a considerable proportion of educators reported moderate to severe psychological distress. A variety of psychosocial working conditions, including financial and job insecurity, child and family characteristics, work-related social support and ERI measures had significant relationships with mental health outcomes. Notably, an imbalanced ERI ratio was common and related to significantly worse mental health outcomes. This research supports investment in the FDC workforce beyond training and reforms to practice by modifying psychosocial working conditions (i.e. increasing financial security, social support and respect) and the ECEC system, which includes FDC schemes, the ECEC sector and relevant government policy and initiatives, to support the mental health and wellbeing of educators.
References


Introduction

There is ample evidence to suggest that the work of the early childhood educator is poorly understood outside the field itself. The very nature of early childhood work is closely aligned with discourses of mothering and often perceived to be ‘natural’ and taken-for-granted (Ailwood, 2007; Cannella, 1997). Further, the knowledge and deliberations brought to play-based curricula are often overlooked, as play is regarded as naturally occurring for children. Those who know and do this work, however, recognise it as complex, challenging and highly demanding and also requiring specialist knowledge and ongoing professional development. Nevertheless, unrealistic expectations about the nature of the work persist and lead to attrition from vocational training and university studies. For example, significant numbers of students who failed to complete their early childhood qualification state that they ‘found the practical experience more challenging than they had expected’ (Wynes, Gemici & Stanwick, 2013, p. 8). There is, therefore, a vital and strategic need to make visible the everyday work of early childhood educators (hereafter referred to as ‘educators’) so that it might be better understood, evaluated, planned for and appropriately rewarded (Ryan & Whitebrook, 2012).
similar study of Australian educators and no large-scale study of educators’ everyday work.

Arguably, the nature of the work of early childhood educators is often inferred rather than described. This occurs through assertions (e.g. ECE as distinct from school education) and broad descriptors (‘child-focused’, ‘play-based’), or by educators’ work being subsumed under other descriptors (e.g. ‘qualified educators’ as contributors to high-quality ECE). However, without a clear understanding of what educators do in their everyday work and evidence to support those understandings, it is difficult to argue for, or develop, effective early childhood workforce policy. Making visible the nature and complexity of early childhood educators’ work can inform strategies to address workforce planning at various stages of the workforce cycle (Cumming, Sumision & Wong, 2015). Accurate explanations of the work are required to: attract people best suited to the work; inform effective pre-service preparation; and inform policies that retain and sustain educators working in the field. These might include, for example, access to ongoing professional development; adequate pay and conditions; and public recognition.

A number of Australian reports released over the past five years have highlighted the need for greater information about the early childhood workforce to adequately inform workforce policy (Allen Consulting Group, 2011; COAG, 2009; Government of South Australia, 2009; Productivity Commission, 2011). Currently, there are several Australian national data sources that provide information about the characteristics of the early childhood workforce. The National Early Childhood Education and Care Collection (NECECC) (ABS, 2014) provides information on educators’ early childhood-related qualifications, their work designation (e.g. contact or non-contact) and role (e.g. teacher or aide). Similarly, the National Early Childhood Education and Care Workforce Census (The Social Research Centre, 2014) provides information about educators’ qualifications and job satisfaction. Another national data source that provides some opportunity to analyse workforce issues is Growing Up in Australia: The Longitudinal Study of Australian Children (LSAC). For instance, Harrison and colleagues (2009) analysed data from over 3000 educators of four- to five-year-old children, noting marked differences in qualifications and child educator ratios between long day care and preschool settings, but similar amounts of time spent in four types of activities, such as teacher-directed whole group and teacher-supported small group learning experiences. The LSAC data set also allows examination of the context of educators’ work, in terms of the proportion of children with a disability or from culturally and linguistically diverse backgrounds and educators’ perceptions of the supportiveness of their work environment (e.g. Williamson, Davis, Priest & Harrison, 2011). However, these data sources are of limited value for understanding the precise nature of the work of educators.

In summary, despite the important role educators play in contributing to children’s developmental and educative wellbeing, as well as supporting families (ILO, 2014) and the need for accurate information on which to base early years’ workforce strategies and support Australia’s early years’ reforms (COAG, 2009), there is currently no information on the everyday work of Australian early childhood educators. There is a strong need for the collection of generalisable data on the everyday work of educators, but no tool currently exists to capture this data. This paper reports on the first stage of the development of such a tool—the construction of a taxonomy of early childhood educators’ work.

The construction of a taxonomy of early childhood educators’ work

Our starting point was the recognition of the need for a standardised, clearly defined set of descriptors that could be used at scale, to accurately capture the complex, diverse and varied work of educators, across preschool and long day care settings. An important consideration in our deliberations was that the resultant tool was simple, easy to use and readily replicable so that:

- the work of educators could be made visible
- comparisons could be made across contexts and position
- variations across a typical day could be understood
- specific data could be collected for informing early childhood workforce policy.

The first step in the development of this tool was the creation of a taxonomy of the work of educators that could be used to codify data. A taxonomy is a system for classifying concepts according to some scientific rules (Encyclopedia Britannia, 2014). The term ‘taxonomy’ has been used primarily in the biological sciences to refer to classifications of living organisms, but can refer to the classification of any ‘things’ or concepts—such as the work of early childhood educators. Indeed, taxonomies have been created in many fields of work to develop national and international standards, for example, in accounting (IFRS, 2014) and nursing (Bowker, Star & Spasser, 2001; Clark, 1998). In nursing, which similarly to early years’ education had a diverse and inconsistent nomenclature, a taxonomy was developed that resulted in the generation of the International Classification of Nursing Practice (Bowker et al., 2001; Clark, 1998; International Council of Nurses, 2014). We have chosen to use the term ‘taxonomy’ to refer to our coding system, rather than ‘classification’, so as not to confuse the taxonomy of work, with job classifications (e.g. educator/teacher).

Perhaps the most well-known taxonomy in education is Bloom’s Taxonomy of Educational Objectives (Krathwohl, 2002). Bloom developed his original taxonomy in 1956.
with colleagues Engelhart, Furst, Hill and Krathwohl. Bloom’s taxonomy demonstrates the relationship between overarching educational objectives and the knowledge required to achieve those objectives. The rationale for developing Bloom’s taxonomy included a need to develop a ‘common language’ so as to facilitate better communication across educational personnel and institutions (Krathwohl, 2002).

Similar to Bloom, we anticipate the Taxonomy of Early Childhood Educators’ Work, will develop a ‘common language’ of educators’ work. But the focus of our taxonomy is somewhat different to Bloom’s. We aim to develop an exhaustive list of educators’ work tasks, activities and actions, hierarchically arranged under overarching domains of early childhood care, education and management, although we recognise this list may need modification or refinement once it is taken into the workplace. In the following section we outline the method used to construct the taxonomy.

**Method for constructing the Taxonomy of Early Childhood Educators’ Work**

The construction of our taxonomy occurred in two stages: (1) developing domains for the taxonomy; and (2) refining the taxonomy. Each stage had two steps.

**Stage 1. Developing domains for the taxonomy**

The initial development of domains and sub-classes for the taxonomy occurred in two steps: (1) creation of an initial framework by an expert panel; and (2) collection of educators’ records of their work activities over the day (time-use diary).

**Step 1: Creation of an initial framework by an expert panel**

**Rationale**

There is precedence for the use of expert panels in the development of tools in ECE. In particular, in the development of the original Early Childhood Environment Rating Scale (ECERS) (Harms & Clifford, 1983), a panel of seven experts rated the importance of items listed on a prototype scale. The subsequently refined and modified scale has been highly influential in ECE research, practice and professional development, being used extensively in international studies of ECE quality. The ECERS was the prototype for the development of similar measures for infant/toddler and family day care settings (ITERS and FDCRS). All of these tools have since been revised and are used widely (see Frank Porter Graham Child Development Institute for a list of research using ECERS and ECERS-R http://ers.fpg.unc.edu/research).

**Step 2: Collection of educators’ time-use diaries**

To further inform the development of domains and sub-classes of tasks, as well as activities and actions undertaken during an educator’s typical day, we collected time-use diaries from a sample of educators working in preschools and long day care centres.

**Rationale**

Time-use diary methodology is most typically used in social sciences research to record a person’s activities as they naturally and sequentially occur in daily life (Gershuny & Sullivan, 1998). The aim is to collect a detailed, complete and accurate estimate of the time spent in different activities over one or more 24-hour periods. Time-use diaries have been used, for example, to describe the amount of time parents engage in daily child care (Kalenchoski, Ribar & Stratton, 2005) or leisure activities (Bittman & Wajcman, 2000) and, using parent-reported time-use diaries, the amount of time four- to five-year-old children spent watching television, snacking and engaging in physical activity (Brown, Broom, Nicholson & Bittman, 2010).

**Procedures**

In the current project, four meetings of a panel of up to six early childhood experts from three universities (two in Australia, one in the USA) were convened to develop the taxonomy. Drawing on their collective extensive research and professional work in the field, the panel first brainstormed (Jablin & Seibold, 1978) to elicit a rich bank of ideas about the tasks, activities and actions undertaken by educators in their everyday work. The brainstorming was facilitated by imagining a day in the life of an educator from opening in the morning to closing at the end of the day. A recorder listed all suggestions. The purpose was to generate multiple ideas and common terms to describe ECE work.

The panel then chunked the ideas into ‘like’ categories (later referred to as domains). At this point we also drew on Belonging, Being & Becoming: The Early Years Learning Framework for Australia (EYLF) (DEEWR, 2009) to inform our nomenclature. For example, we used the phrase ‘intentional teaching’, found in the ‘practice’ element of the EYLF, to refer to ‘deliberate, purposeful and thoughtful’ teaching (DEEWR, 2009, p. 5).

From these processes we developed a list of 11 domains (e.g. personal care/routine care; intentional teaching), seven of which were described in more specific terms by a number of sub-classes (e.g. Domain 3: Personal care/routine care with children > Sub-class 31: Hygiene—washing, dressing, undressing, toileting, nappy change). These 11 domains (numbered 0–10) and 32 sub-classes were subsequently inserted into an Excel spread sheet (see Figure 1).
Figure 1. Initial domains (0–10) and sub-classes developed in Stage 1, Step 1

<table>
<thead>
<tr>
<th>1-digit code</th>
<th>2-digit codes and explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Break no work-related activity</td>
</tr>
<tr>
<td></td>
<td>(Morning/afternoon tea, lunch, toilet)</td>
</tr>
<tr>
<td>1</td>
<td>Being with children</td>
</tr>
<tr>
<td></td>
<td>(Observing/supervising, listening/responding to children)</td>
</tr>
<tr>
<td>2</td>
<td>Intentional teaching with children</td>
</tr>
<tr>
<td>21</td>
<td>Problem solving with children</td>
</tr>
<tr>
<td>22</td>
<td>Helping children to be effective communicators</td>
</tr>
<tr>
<td>23</td>
<td>Literacy related</td>
</tr>
<tr>
<td>24</td>
<td>Numeracy related</td>
</tr>
<tr>
<td>25</td>
<td>Science related</td>
</tr>
<tr>
<td>26</td>
<td>Social skills related</td>
</tr>
<tr>
<td>27</td>
<td>Arts/music related</td>
</tr>
<tr>
<td>28</td>
<td>Health/wellbeing/physical ability</td>
</tr>
<tr>
<td>3</td>
<td>Personal care/routine care with children</td>
</tr>
<tr>
<td>31</td>
<td>Hygiene (washing, dressing, undressing, toileting, nappy change)</td>
</tr>
<tr>
<td>32</td>
<td>Nutrition (feeding, providing food/drink, eating together, helping children at mealtime)</td>
</tr>
<tr>
<td>33</td>
<td>Health (putting on hats, sunscreen, administering medication, medical attention)</td>
</tr>
<tr>
<td>34</td>
<td>Sleep/rest (putting infants into cots, patting children to sleep, sitting with sleeping children)</td>
</tr>
<tr>
<td>34</td>
<td>Organising transition to meals/wash/toilet/sleep (guide/lift children to chairs, bed)</td>
</tr>
<tr>
<td>4</td>
<td>Emotional support with/for children</td>
</tr>
<tr>
<td>41</td>
<td>Supporting positive behaviour</td>
</tr>
<tr>
<td>42</td>
<td>Mediating conflict</td>
</tr>
<tr>
<td>43</td>
<td>Comforting children (cuddle, hold, give affection)</td>
</tr>
<tr>
<td>44</td>
<td>Encouraging inclusion</td>
</tr>
<tr>
<td>45</td>
<td>Other emotional support</td>
</tr>
<tr>
<td>5</td>
<td>Organising learning environment</td>
</tr>
<tr>
<td></td>
<td>(Setting up equipment, packing away toys; includes setting up for routine care, e.g. beds, chairs)</td>
</tr>
<tr>
<td>6</td>
<td>Routine tasks/chores</td>
</tr>
<tr>
<td></td>
<td>(Laundry, cleaning, food preparation, sweeping the floor)</td>
</tr>
<tr>
<td>7</td>
<td>Planning, assessment, evaluation</td>
</tr>
<tr>
<td>71</td>
<td>Curriculum planning</td>
</tr>
<tr>
<td>72</td>
<td>Assessment of individual children</td>
</tr>
<tr>
<td>73</td>
<td>Pedagogical documentation</td>
</tr>
<tr>
<td>74</td>
<td>Other planning, assessment, evaluation</td>
</tr>
<tr>
<td>8</td>
<td>Administration</td>
</tr>
<tr>
<td>81</td>
<td>Record keeping (children’s records, incident reports, etc.)</td>
</tr>
<tr>
<td>82</td>
<td>Staff meeting</td>
</tr>
<tr>
<td>83</td>
<td>Other administration</td>
</tr>
<tr>
<td>9</td>
<td>Professional learning</td>
</tr>
<tr>
<td>91</td>
<td>Self-educate through reading/watching/listening</td>
</tr>
<tr>
<td>92</td>
<td>Engaging in professional development/inservice</td>
</tr>
<tr>
<td>93</td>
<td>Mentoring others</td>
</tr>
<tr>
<td>94</td>
<td>Being mentored</td>
</tr>
<tr>
<td>10</td>
<td>Communicating with families</td>
</tr>
<tr>
<td>101</td>
<td>Individualised communication: face-to-face</td>
</tr>
<tr>
<td>102</td>
<td>Individualised communication: email, telephone</td>
</tr>
<tr>
<td>103</td>
<td>Group communication (e.g. documentation, newsletter)</td>
</tr>
</tbody>
</table>

Time-use diary methodology has been used in studies of the early childhood workforce in the USA, but as far as we know, not in Australia. Ryan and colleagues have collected retrospective time-use diaries by telephone interview asking participants to recall the day’s work-related activities (Ryan & Hornbeck, 2004; Ryan, Hornbeck & Frede, 2004). We drew on the template they designed for recording this information, which asked educators ‘to think of all the activities and people you interact with throughout the day and to record these, beginning with what you did when you woke up yesterday morning until you went to sleep that night’.

**Procedures**

In the current study, following ethics approval from Charles Sturt University (protocol no. 300/2014/08), 21 educators (excluding centre directors), with a range of qualifications and who worked directly with children, were recruited (using convenience sampling) from five ECE services across two states: New South Wales and Queensland (see Table 1).

Table 1. Time-use diary participants

<table>
<thead>
<tr>
<th>Centre type</th>
<th>Location</th>
<th>Number of educators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long day care</td>
<td>Regional NSW</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Metropolitan Sydney</td>
<td>6</td>
</tr>
<tr>
<td>Preschool</td>
<td>Metropolitan Brisbane</td>
<td>5</td>
</tr>
<tr>
<td>(three services)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Each educator was provided with a time-use diary template and asked to complete the diary for one working day. Participants were asked to record: the time the activity commenced and finished; a description of the task/activity in as much detail as reasonable; the context of the activity, that is, with whom the activity occurred (children or adults) and where it occurred (inside, room or outside, space). Participants returned their completed time-use diary to the researcher by hand at a pre-arranged time or via a stamped addressed envelope. See Figure 2 for the time-use diary template, instructions given to participants and sample responses.
Stage 2. Refining the taxonomy

The second stage of the project was to refine and test the domains and sub-classes created by the expert panel; first, by drawing on the data from educators’ completed time-use diaries, and second, by seeking educator feedback on the refined domains and sub-classes through focus groups and interviews.

Step 1: Analysing the time-use diary data and refining the domains and sub-classes

Data from the time-use diaries was coded based on the panel-developed domains and sub-classes described in Figure 1. We found that the time-use diary data provided by educators could be readily coded based on these domains and sub-classes. For an example of this coding see Figure 2, where the circled number relates to the domain and sub-class (e.g., 31 = Domain 3: Personal care/routine care with children; Sub-class 1: Hygiene). The ease with which the time-use diary records could be coded according to the domains and sub-domains indicated their appropriateness and applicability for the purpose of developing a taxonomy.

Findings

Reading and coding the written diaries indicated that the educators’ working days were primarily spent ‘being with children’ (Domain 1), or engaged in ‘personal care/routine care with children’ (Domain 3); ‘emotional support with/for children’ (Domain 4); ‘organising learning environments’ (Domain 5); ‘routine tasks/chores’ (Domain 6). There were surprisingly few references to ‘planning, assessment and evaluation’ (Domain 7) or to ‘professional learning’ (Domain 9).2

Findings from the analysis enabled us to refine the taxonomy. In regard to the ‘intentional teaching’ domain, participants tended to describe activities they undertook in general terms without reference to pedagogical language. This meant that inferences often had to be drawn when assigning this code. For instance, ‘assisting children to climb’ was inferred as meaning the educator was intentionally teaching physical skills and was coded in the ‘intentional teaching’ domain, ‘health, wellbeing/physical ability’ sub-class 28 (see Figure 1). The lack of pedagogical language used by participants in the written time-use diaries reaffirmed to us the need for the taxonomy to provide explicit pedagogical language that educators would easily recognise and use to classify their work. The ‘intentional teaching’ domain was therefore modified to include a range of ‘curriculum’ focus areas (e.g. literacy; numeracy; science/nature; social/cultural studies).

Gaps in the original panel-developed taxonomy of domains and sub-classes were identified through a process of ‘backward mapping’. That is, data from the time-use diary data that could not be coded were first highlighted...
and then re-examined to determine how and where they could be included. This led to the expansion of some sub-classes. For instance, one participant recorded that she had to take time out to care for an injury to herself. Consequently, Domain 0, ‘break/no work related activity’ was amended to become ‘staff personal time’ with ‘self-care activity’ included as a sub-class. Through this process of refinement, which included the collapse of two domains into one, the taxonomy was amended to 10 domains, each with a number of sub-classes. This revised version of the taxonomy was developed into a presentation (see Figures 3 and 4) and shared with participants for their feedback.

Figure 3. First level of taxonomy as presented to participants in Stage 2: Showing domains 0–7 (of 10)
Figure 4. Second level of taxonomy as presented to participants in Stage 2: Showing ‘sub-classes’ 0–7 (of 9) of intentional teaching (Domain 1)

Step 2: Educator feedback on the taxonomy
To further refine the taxonomy, we conducted two focus groups (10 participants in the regional long day care service; five participants in the metropolitan preschool) and interviews with a further five participants (in three metropolitan long day care services) who had completed the original time-use diary (20 participants in total). The different follow-up methods and slightly reduced number of participants from Stage 1 were due to participant availability.

We followed a process of iterative development of the taxonomy domains and sub-classes. That is, after receiving feedback from each focus group or group of interviews, the research team met to confirm or further refine the terms used to describe each domain and sub-class. The refined version was then shown to the next focus group. In total, the taxonomy went through three sequential iterations.

Findings
Feedback from the focus groups/interviews indicated strong agreement that the 10 domains accurately captured the depth and breadth of the day-to-day work tasks, activities and actions of educators across any day. Given our findings from the time-use diary analysis, educators were asked in particular to consider the ‘sub-classes’ within the ‘intentional teaching’ domain. Educators responded positively to these sub-classes but also reinforced the need to ensure that these and other domains and sub-classes were clear and well-defined. Further, participants made suggestions for changing the nomenclature of some domains (e.g. replacing the word ‘chores’ with ‘maintenance’ in Domain 7: Organising room/OH&S maintenance). There were also suggestions for adding sub-classes, such as ‘organising staffing’ to Domain 9: Administration; ‘receive mentoring’ to Domain 10: Professional learning and support; and ‘support colleague’ to Domain 5: Emotional support. Following these suggestions the panel developed clear definitions for each domain and made appropriate changes to the taxonomy. This final version of the taxonomy (with the domains renumbered 1–10) is presented in Table 2.

Additional comments
In addition to feedback on the taxonomy, the participants provided general feedback on the study and their own engagement. Participants were very supportive of the development of the taxonomy and could see its usefulness for the field. Several participants noted that they found doing the time-use diary affirming and empowering as it facilitated their reflection on the diversity and intensity of their work. One participant commented for instance that ‘anything that makes visible the work we do, is important’ and another stated that it was ‘important if this raises the profile of our work’. Another participant noted that she found completing the time-use diary ‘cathartic’ as it demonstrated what she did on a daily basis. She went further and took photos of different aspects of her daily work, sharing this with her life-partner, telling him ‘this is why I am so exhausted every day’. Such comments point to a need for research from within the field that documents the work of educators and demonstrates the potential of this taxonomy for doing so.

Conclusion
The Taxonomy of Early Childhood Educators’ Work described in this paper is a prototype. As such, it is an Alpha model and we anticipate that it may be modified over time as we receive feedback from users. The Alpha model taxonomy consists of 10 domains, each with a number of clearly defined sub-classes (see Table 2). We anticipate
that the taxonomy is an accurate codification system for assessing the daily work tasks, activities and actions of early childhood educators in diverse early years’ settings and will prove a valuable tool for subsequent research investigating the early childhood workforce. The sample size of educators from whom time-use diary data was collected (n = 21), along with feedback from those who trialled the taxonomy (n = 20), was sufficiently large to refine the taxonomy and confirm face validity. Further, we believe that while it has been developed in the Australian context, it nevertheless has relevance to, and could be applied in, international contexts. We recognise, however, that the taxonomy still needs to be tested with a larger sample of educators.

Cautions/limitations

Early childhood educators’ work is dynamic and will change over time. The Alpha model Taxonomy of Early Childhood Educators’ Work reflects current practices and will need to be modified and amended over time. We also recognise that the current taxonomy may not capture everything that an educator does. Nevertheless, as a co-constructed and valid starting point, it can and should be modified and developed. We welcome critical feedback and submissions for additions/amendments. We further acknowledge that some aspects of educators’ work may not be able to be captured by the taxonomy and may remain invisible. We welcome comments on this also.

In proposing a taxonomy there is a potential danger that the tool could be misused as a means for surveillance of the early childhood workforce—for example, employers could use it to keep track of educators’ everyday work. Once developed, any tool can be misused or used in ways not intended by the developers. But we believe that the benefits of making visible the work of the educator outweigh the potential risks.

Table 2. A Taxonomy of Early Childhood Educators’ Work: Alpha Model (these definitions will depend in part on the age of the child/age group)

<table>
<thead>
<tr>
<th>Domain</th>
<th>Sub-class</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Staff personal time</td>
<td>1.1. Scheduled break</td>
<td>e.g. meal break for lunch, morning tea, afternoon tea</td>
</tr>
<tr>
<td>1.2. Other break</td>
<td>e.g. toilet, phone call</td>
<td></td>
</tr>
<tr>
<td>1.3. Self-care activity</td>
<td>e.g. care for self injury, taking ‘time-out’; prayer/religious reasons</td>
<td></td>
</tr>
<tr>
<td>2. Intentional teaching with children</td>
<td>2.1. Problem solving</td>
<td>e.g. guided discussion, questioning, construction; working out how to build something or solve a puzzle; guessing game; rules of a board game</td>
</tr>
<tr>
<td>2.2. Literacy</td>
<td>e.g. writing, book reading, storytelling, show and tell</td>
<td></td>
</tr>
<tr>
<td>2.3. Numeracy</td>
<td>e.g. counting, ordering, size and shape, weight, height</td>
<td></td>
</tr>
<tr>
<td>2.4. Science/nature</td>
<td>e.g. caring for the environment, gardening, learning about plants and animals, exploring properties of materials, cooking</td>
<td></td>
</tr>
<tr>
<td>2.5. Social/cultural studies</td>
<td>e.g. people, places, foods, language, living in a diverse community, local events</td>
<td></td>
</tr>
<tr>
<td>2.6. Art/craft</td>
<td>e.g. painting, drawing, collage with a range of media</td>
<td></td>
</tr>
<tr>
<td>2.7. Music/dance</td>
<td>e.g. singing or playing instruments, movement to music</td>
<td></td>
</tr>
<tr>
<td>2.8. Media/technology</td>
<td>e.g. use of iPads, computers, games or other devices</td>
<td></td>
</tr>
<tr>
<td>2.9. Physical/self-help</td>
<td>e.g. organised games, using equipment for throwing/catching/kicking, climbing and balancing, also fine motor skills such as using scissors; self-help, teacher showing child to use a spoon or cup to feed self; using the toilet. If not teaching, score 4.1 or 4.2</td>
<td></td>
</tr>
<tr>
<td>2.10. Health/wellbeing</td>
<td>e.g. healthy foods, nutrition (e.g. talking about food at mealtime), exercise, understanding feelings caring for others (resilience, emotional development, mental health)</td>
<td></td>
</tr>
<tr>
<td>3. ‘Being with’ children</td>
<td>3.1. Watch/scan/supervise</td>
<td>e.g. watch and ensure safety of children, without necessarily interacting or teaching</td>
</tr>
<tr>
<td>3.2. Play with children</td>
<td>e.g. play alongside or together with children (digging in sandpit; building something; using art materials, joining in with a game such as hide and seek or pretend play)</td>
<td></td>
</tr>
<tr>
<td>3.3. Listen/respond to children</td>
<td>e.g. interact/engage with children to respond to/attend to their needs, helping children to do something without necessarily teaching (provide materials, hold hands while jumping). Can include greeting children on arrival, but this could be 6.1 if greeting family as well (don’t score both)</td>
<td></td>
</tr>
<tr>
<td>Domain</td>
<td>Domain</td>
<td>Sub-class</td>
</tr>
<tr>
<td>--------</td>
<td>--------</td>
<td>-----------</td>
</tr>
<tr>
<td>4. Routine care/transition with children (educator is with the children, interacting or supervising)</td>
<td>4.1. Hygiene</td>
<td>e.g. support children with washing, toileting, nappy change, dressing that is related to hygiene</td>
</tr>
<tr>
<td></td>
<td>4.2. Nutrition</td>
<td>e.g. providing food, drink, helping children with eating and putting away plates</td>
</tr>
<tr>
<td></td>
<td>4.3. Health</td>
<td>e.g. apply sunscreen, wearing hats, administering medication, blow nose</td>
</tr>
<tr>
<td></td>
<td>4.4. Sleep/rest</td>
<td>e.g. support children with sleep routine or rest time, including setting up and packing away bedding with children, getting dressed after sleep</td>
</tr>
<tr>
<td></td>
<td>4.5. Organise transitions</td>
<td>e.g. support small groups, or whole group of children to move from one part of program to another—e.g. mat time to bathroom to meal time or from indoor to outdoor play; getting ready to go home; packing up the toys with children. Include dressing that is part of the transition—such as putting on coats</td>
</tr>
<tr>
<td></td>
<td>4.6. Deal with injury/illness</td>
<td>e.g. provide first-aid and care to children who are injured, hurt, sick or unwell. There is a sense of urgency; e.g. washing sand out of child’s eyes</td>
</tr>
<tr>
<td>5. Emotional support</td>
<td>5.1. Support positive behaviour</td>
<td>e.g. acknowledge, praise, guide and support child/children to interact positively with other children</td>
</tr>
<tr>
<td></td>
<td>5.2. Mediate conflict</td>
<td>e.g. intervene and support children during a dispute over a toy or equipment; negotiate</td>
</tr>
<tr>
<td></td>
<td>5.3. Comfort child</td>
<td>e.g. provide physical and/or verbal comfort when a child is distressed or tired; holding baby during bottle feed</td>
</tr>
<tr>
<td></td>
<td>5.4. Stop unsafe behaviour</td>
<td>e.g. intervene and support children to interact positively, and stop negative behaviour/s, manage biting or aggressive acts</td>
</tr>
<tr>
<td></td>
<td>5.5. Encourage inclusion</td>
<td>e.g. support children to include a peer and to be sensitive to individual, cultural and other differences (such as considering the needs of a child with a disability)</td>
</tr>
<tr>
<td></td>
<td>5.6. Other child related</td>
<td>e.g. provide emotional support for children during difficult times (i.e. separation at arrival, departure times, or group/mat times, rest time)</td>
</tr>
<tr>
<td></td>
<td>5.7. Support colleague</td>
<td>e.g. support colleague who is upset, requiring comfort</td>
</tr>
<tr>
<td>6. Family communication</td>
<td>6.1. Individual face-to-face</td>
<td>e.g. speaking with parent/carer; collaborating, working together, greeting</td>
</tr>
<tr>
<td></td>
<td>6.2. Individual email, phone</td>
<td>e.g. communicating with parent/carer via email or phone</td>
</tr>
<tr>
<td></td>
<td>6.3. Group/individual written</td>
<td>e.g. writing newsletter, documentation for families, communication book</td>
</tr>
<tr>
<td>7. Organise room/OH&amp;S maintenance</td>
<td>7.1. Set up</td>
<td>e.g. set up and/or prepare equipment/toys, room, outdoor space</td>
</tr>
<tr>
<td></td>
<td>7.2. Pack-up</td>
<td>e.g. pack up and/or prepare equipment/toys, room, outdoor space</td>
</tr>
<tr>
<td></td>
<td>7.3. Food</td>
<td>e.g. prepare and serve food—brought from home or provided in centre</td>
</tr>
<tr>
<td></td>
<td>7.4. Clean/tidy</td>
<td>e.g. clean and maintain (e.g. restock) or tidy the room, outdoor environment, and equipment/toys (do not use if packing away with the children = 4.5)</td>
</tr>
<tr>
<td></td>
<td>7.5. Laundry</td>
<td>e.g. attend to laundry, using washing machine or bundling soiled clothes/manchester to be laundered off site (company/family/staff)</td>
</tr>
<tr>
<td></td>
<td>7.6. Maintenance/OH&amp;S compliance needs</td>
<td>e.g. maintain physical environment and equipment to ensure safety of children and adults and comply with relevant policies, centre and organisational, and legislation (e.g. check temperature of fridges/including recording compliance)</td>
</tr>
<tr>
<td></td>
<td>7.7. Tend to plants/animals</td>
<td>e.g. water plants, prune; feed animals and clean out enclosures</td>
</tr>
<tr>
<td>8. Plan/assess/evaluate</td>
<td>8.1. Curriculum planning</td>
<td>e.g. writing plans; programming</td>
</tr>
<tr>
<td></td>
<td>8.2. Observe/assess child</td>
<td>e.g. writing observations, using assessment tools, documenting</td>
</tr>
<tr>
<td></td>
<td>8.3. Document learning</td>
<td>e.g. developing documentation, pedagogical documentation</td>
</tr>
<tr>
<td></td>
<td>8.4. Evaluate</td>
<td>e.g. evaluating of plans, documentation and program</td>
</tr>
<tr>
<td>9. Administration</td>
<td>9.1. Record keeping, roll</td>
<td>e.g. maintaining records on children (e.g. immunisation/contact details/court orders), keeping a daily roll of attendance</td>
</tr>
<tr>
<td></td>
<td>9.2. Answer phone/door</td>
<td>e.g. meeting and greeting visitors to the centre—phone and via entrance, including deliveries</td>
</tr>
<tr>
<td></td>
<td>9.3. Staff handover/communication</td>
<td>e.g. time spent talking to share information about children, program, daily events, housekeeping to support a smooth transition between staff</td>
</tr>
<tr>
<td></td>
<td>9.4. Staff meeting</td>
<td>e.g. time as a group of staff (whole/room team/partial group) to address centre administrative matters</td>
</tr>
<tr>
<td></td>
<td>9.5. Organising staffing</td>
<td>e.g. staff rosters—weekly, monthly, static; arranging relief staff; room relief for programming times, meetings; daily checking of ratios</td>
</tr>
<tr>
<td></td>
<td>9.6. Other</td>
<td>e.g. ordering of supplies, liaising with government bodies, professional associations, affiliation organisation</td>
</tr>
</tbody>
</table>
A comprehensive analysis of the data, including proportions of

In this paper, early childhood educators (or ‘educators’) refer

Endnote

who participated in the study.

Collaborative Research Network project that facilitated the development of this paper. We also thank the educators

Excellence in Research in Early Years Education

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Future work

We are currently using the taxonomy to develop a tool—a random time sampling time-use diary—to capture data that will make visible and objectively measure the work of educators on a large scale, enabling comparisons of data across settings, professional backgrounds, contexts and time. Ultimately, this data will build the knowledge base about the early years’ workforce and hopefully contribute to the development of effective workforce policy.

References


We also acknowledge the limitations of a single-line format in setting out the taxonomy, which does not account for the problem of measuring multiple activities occurring at any one time. Therefore, any tool subsequently developed from the taxonomy would need to capture multiple activities occurring simultaneously (e.g. comforting a child while talking to a parent).

Domain | Sub-class | Definition
---|---|---
10. Professional learning and support | 10.1. Self-educate | e.g. accessing professional materials independently—reading materials online, professional publications, journals, texts
| 10.2. Attend PD/in-service | e.g. course, seminar, symposium, conference
| 10.3. Support/mentor others | e.g. spend time supporting and guiding colleague/s—provide advice, challenges or affirmations (within centre or outside). Include induction and training of new staff in this category
| 10.4. Receive support/ mentoring | e.g. receive support, guidance and mentoring from peer/s or colleague/s—receive advice, challenges or affirmations (from centre staff or colleague outside centre)
| 10.5. Pedagogical leadership | e.g. provide leadership with peer/s or colleague/s around teaching and learning, professional discussions where ideas and approaches are challenged
| 10.6. Reflection | e.g. spend time thinking and revisiting professional learning, and creating professional plans

Endnote

1 In this paper, early childhood educators (or ‘educators’) refer to people paid to work directly with children in early years’ centre-based services (i.e. not family day care as these services differ markedly from centre-based services) regardless of level of qualification or service type.

2 A comprehensive analysis of the data, including proportions of the day spent in each activity, will be reported elsewhere.


Introduction

In a 2008 media release, Early Childhood Australia (ECA) welcomed then Prime Minister Rudd’s proposal to put young children at the centre of the 2020 vision for the nation as a ‘cause for celebration’ (ECA, 2008). The media release concluded with ECAs’ hopes that the Prime Minister’s vision for early childhood becomes a vision for the nation’ (ECA, 2008). In 2009, on the brink of major reforms in Australian early childhood education and care (ECEC), Cheeseman and Torr (2009) qualified the need for a new era of ECEC policy by referring to: advances in research and neuroscience which have increased awareness of the importance of the early years; a rise in women’s workforce participation; and international reports ‘revealing Australia’s relatively poor performance on a number of measures regarding early childhood education and care’ (p. 67). Furthermore, Cheeseman and Torr (2009) highlighted ‘widespread community concern about the quality of provision’ (p. 61) as they presented an existing context of Australian early childhood provision that was: fragmented; hampered by the historic separation of responsibilities for early childhood education and care; affected by ‘questionable’ funding policies; and tied to a ‘burdensome’ system of regulation and quality assurance.

The major policy reforms responding to these needs and concerns include the development of a National Quality Framework (NQF) (ACECQA, 2011a), which comprises the Early Years Learning Framework (EYLF) (DEEWR, 2009) and the National Quality Standard (NQS) (ACECQA, 2011b), a national rating system. These reforms are ‘designed to improve the quality, access and equity of early childhood services’ in Australia (Cheeseman & Torr, 2009, pp. 61–62), address the historic ‘bifurcation between education and care’, and seek to overcome the ‘fragmentation and patchwork nature’ (Cheeseman & Torr, 2009, p. 68) of service provision. For the first time in its history of early childhood provision, Australia has taken a ‘national approach to quality standards, equity of access and a national early years learning framework’ (Cheeseman & Torr, 2009, p. 68).

With the advent of these reforms, many government agencies reconsidered their engagement with and provision for the early years. One such agency was the Department of Sport and Recreation of Western Australia (DSR); this article reports on the South-West Early Childhood Project (SWECP), a pilot study focusing on the ways that communities in the regional south-west of Western Australia (WA) afford opportunities for young...
children and their families to be physically active. Nested within this primary aim and of particular interest to this article, was an investigation into how young children aged birth to five years and their families are viewed and welcomed in their communities. The study engaged a team of multidisciplinary researchers in a ‘Rapid Rural Appraisal’ (Richards, 1996) of three towns: Crayton, Karrak and Oakup (pseudonyms). Located within a 300 km radius south of the metropolitan area of Perth, these towns are focused on farming and tourism activities, with populations ranging from 2500 to 4400 residents (Buckley et al., 2013). In this article we discuss how childhood is constructed in each town and explore possible implications for a collective re-imagination of childhood in support of the livelihood of national early childhood reform in Australia. Our concern lies with how the values inherent in the reform, such as hope for the early childhood profession and a strong image of childhood, may be enlivened through collective, grassroots action.

Narratives of hope

The EYLF has been hailed as ‘a landmark’ and ‘a strong statement of commitment about the entitlement of Australian children to rich opportunities to learn’ (Cheeseman & Torr, 2009, p. 70). The NQF was similarly heralded politically as offering the ‘promise of a new era’ (Fenech, Giugni & Brown, 2012, p. 5). To the Australian ECEC sector this attention to young children in policy and discourse offers the promise of hope, transformation and reinvigoration (Cheeseman & Torr, 2009; Fenech et al., 2012; Sumsion et al., 2009). In fact, much of the celebration around the reforms emerges from a field that has often bemoaned its invisibility and consequently views the attention as belated recognition.

For example, Cheeseman (2007) laments the absence of early childhood pedagogical voices within debates on ECEC and cites Stonehouse’s (1994) perception of early childhood educators as ‘victims of change’ (p. 251). Sumsion (2006) refers to this as ‘the cultural narrative of marginalisation’ which derives from ‘the tendency for our voices not to be heard’ (p. 3); she argues the case for political activism, inviting early childhood professionals to cultivate ‘critical imagination and critical literacy’ thus equipping themselves ‘with the capacities to engage in effective critical action’ (p. 8). Sumsion (2006) concludes that through critical action ‘we can work towards transforming the world, rather than simply resigning ourselves to adapting to it’ (p. 8).

Members of the consortium contracted to write the EYLF construct a reflection as a result of what a society ‘hopes to become’ (Reid, 2008, cited in Sumsion et al., 2009, p. 7) and in discussing ‘narratives of hope’ (Sumsion et al., 2009), they refer to the ‘hopes that the EYLF will lead to increased valuing by society of the important role of early childhood settings and enhanced professional status for early childhood practitioners’ (Sumsion et al., 2009, p. 7). Hope and activism can thus be construed as antidotes to the marginalisation and loneliness of early childhood professionals. This echoes the work of Freire (1994), who, while promoting a ‘pedagogy of hope’, also cautions the need for action anchored in practice:

_The idea that hope alone will transform the world, and action undertaken in that kind of naïveté, is an excellent route to hopelessness, pessimism, and fatalism … Hope, as an ontological need, demands an anchoring in practice in order to become historically concrete. That is why there is no hope in sheer hopefulness. The hope-for is not attained by dint of raw hoping (p. 2)._  

The ‘insider perspectives’ on developing the EYLF, position narratives of hope alongside the persistent political ‘narratives of salvation’ and ‘narratives of political risk’ (Sumsion et al., 2009). Narratives of salvation, which ‘emphasise the production of future citizens with desirable qualities by addressing deficits’ (Popkewitz, 2009, cited in Sumsion et al., 2009, p. 7), subsist on the premise of deficit images of children; narratives of political risk are suffused with rhetoric on children as citizens of the future who will one day contribute to the economy. These narratives are rife in political discourse on young children and are very difficult to resist: the powerful narratives of political risk, for example, led to the progressive toning down in response to government sensitivity of any mention of children’s participatory rights and social justice issues in the final EYLF draft (Sumsion et al., 2009). Contemporary constructions of early childhood settings as ‘places of culture’ (Rinaldi, 2001) ‘places of mutuality’ (Bruner, 1996), ‘loci of ethical practice’ and ‘sites for democratic politics’ (Dahlberg & Moss, 2005) offer an alternative possibility to invisibility and loneliness, and position early childhood educators as activists capable of resisting deficit narratives of themselves. The framework of democracy and ethical practice both affords hope and thrives within discourses of hope. This article lends a voice to narratives of hope, in an effort to resist narratives of salvation and political risk.

Images of childhood

The way in which childhood is constructed in communities contributes to the livelihood of narratives of hope and can help build resistance towards narratives of salvation and political risk. This resistance occurs in the Reggio Emilia educational project, which has been constructed as an experience of hope made possible by the participation of all its citizens from its inception in the years following the devastation of the Second World War. Malaguzzi (1998) calls the town’s participation ‘collective wisdom’ and attributes the enduring nature of the experience to the shared aspirations of the citizens of Reggio Emilia; he suggests that in giving birth to and sustaining this ambitious educational project, parents and educators wanted to express a ‘declaration against the betrayal of children’s potential, and a warning that children first of all had to be taken seriously and believed in’ (p. 58).
The image of the child conveyed by the experience of Reggio Emilia is of an intelligent, strong and ambitious being from birth (Malaguzzi, 1994); a citizen with rights. This powerful child is reflected in the field of Childhood Studies (James & James, 2008; Qvortrup, Corsaro & Honig, 2009), which conceptualises children as citizens and social actors. The experience of Reggio Emilia resists narratives of salvation and political risk through its ongoing defence and promotion of the rights and potentials of all children (Reggio Children, n.d.b). The extent to which this powerful image of children as competent citizens will inform a new culture of childhood in Australian towns and communities depends not only on the ‘determination and courage’ (Cheeseman & Torr, 2009, p. 72) of educators, but also on the collective wisdom that enables such an image to persist across all the contexts that children occupy and the people they encounter in their daily lives. While it is encouraging for this strong image of childhood to be enshrined in Australian policy, the livelihood of landmark policy is dependent upon the transformation of wider cultural perceptions, beliefs and values.

Methods

The SWECP presented the opportunity to explore first-hand images of childhood within the context of three regional Australian towns and involved a multidisciplinary team (Massey et al., 2006) including: three representatives of DSR; two early childhood education researchers; one education researcher; one sport and recreation researcher; one community researcher; and one photographic expert. Following ethics approval by the University Human Research Ethics Committee, the team engaged in Rapid Rural Appraisal, a ‘research activity carried out by a group of people from different professional fields’ (UNFAO, 2013) which favours a qualitative research framework, involves collecting information by talking to people ‘on the ground’ (Richards, 1995) and is particularly suited to regional investigations. The approach is denoted as ‘rapid’ to distinguish it from in-depth extended ethnographic studies of communities; the rapidness of the approach does not however assume haste in design or lack of thoughtfulness in analysis. While the research team’s foray into towns involved three one-day field trips, 51 people in total participated in the study across seven sectors engaged with the early years: education; child health; local government; community (parents and grandparents); private day care providers; community child care; and disability services. Furthermore, the study involved considerable coordination of the multi-disciplinary research team, including approximately 12 formal meetings and several other informal discussions to build trust, develop shared understandings, construct a shared language and refine skills such as interview strategies and photography.

DSR’s interest in the early years was triggered by the 2012 results of the Australian Early Development Index (AEDI)—now called Australian Early Development Census (AEDC)—a ‘nationwide survey that shows how young Australian children have developed as they start their first year of full-time education’ (Commonwealth of Australia, 2014). This census reflects assessments recorded by each child’s teacher in their first year of full-time schooling. Held every three years, the AEDC provides a snapshot of communities across Australia and measures five domains of early childhood development: physical health and wellbeing; social competence; emotional maturity; language and cognitive skills (school-based); and communication skills and general knowledge (Commonwealth of Australia, 2014). In response to DSR’s desire to investigate how a variety of seemingly similar regional towns could be returning quite different AEDI results, particularly in the physical and social domains and informed by their broader interest in enhancing physical health and wellbeing for young children, the selection of the towns for this project was based on the following criteria: (1) a community with continued low-risk AEDI scores across the two collection phases; (2) a community with high risk in the 2009 reporting that had shown improvement in 2012; and (3) a community with continued high vulnerability or risk across both data collection periods. On this basis, the towns of Oakup, Crayton and Karrak were selected. The AEDI/AEDC served as a catalyst and a selection metric for the study; the scope was subsequently broadened based on the research team’s discussions around the possible cultural and contextual biases inherent in teachers’ collection of the developmental measures, as well as the limitations associated with the focus on school readiness skills embedded in the census. As noted by a DSR team member in a post-study reflection: ‘when we first came up with this idea for a study we were very much focusing on AEDI and I think we were, in some ways blinkered. Now I see AEDI as simply one catch point that we focused on, so we did broaden it a lot more’.

A key informant with knowledge of the given town and its early years sector was identified in each town site. This informant then provided detailed information to other relevant players, who in turn confirmed additional contacts; an approach that characterises purposive and snowball sampling (Johnson & Christensen, 2008). Prior to visiting a research site, the project team met to access information about the town such as demographic and key indicator data (e.g. Socio Economic Indexes For Areas data and AEDI profile). Research data was primarily obtained through focus-group interviews using a semi-structured interview schedule. Participants were asked about their perceptions of: how their towns welcomed young children aged birth to five years and their families; what events, places and facilities were available to young children and families; how the towns viewed young children; and reasons for high or low vulnerability results on the AEDI. Time was also set aside during each visit to take photos and make general observations about each town including following up on locations of interest that interviewees identified, namely major parks/playgrounds and/or facilities.
Data analysis focused on identifying emerging themes, or ‘distillations of what has been encountered’ (Eisner, 1991, p. 104). The process of ‘distilling’ initially occurred during the road trips as team members shared interpretations. Once data collection was complete, the research team further distilled the interpretations and constructed the themes as narratives. The narratives of invisibility/visibility, sitting still/being active and conformity/diversity are discussed in turn below. Furthermore, the construct of ‘hope’ emerged through analysis as a ‘connective’ theme (Giamminuti, 2013): hope provides a coherent framework for discussion and an organising construct for reflection and action. Consistent with its qualitative research framework, this study makes no claims to generalisation but rather offers itself as an invitation: in sitting comfortably within our qualitative paradigm, we resist the discourse of generalisation and claim no ‘methodological poaching’ (Denzin, 2010, p. 420) of the positivist language of quantitative methods. We are concerned instead with ‘issues connected to empowerment, social justice, and a politics of hope’ (Denzin, 2010, p. 420).

Narratives of invisibility/visibility

The invisibility of young children was exemplified by the frequent need for the research team to focus interviewees’ responses on children aged birth to five:

Interviewer: Where would you see children playing?
Child Health Nurse: On the skate park, I guess.
Interviewer: The little ones? The zero to five on the skate park?
Child Health Nurse: Not the zero to five, no.

When referring to his town’s investment in older children, the Karrak School Principal explicitly mentions the invisibility of younger children and paints a compelling image of the age at which the town’s attention turns to children:

Kids come down the birth canal only when they are ready for high school … You don’t see children in the zero to five age group. If you are talking about this cohort they are actually invisible.

Participants in this town generally deplored the lack of settings, spaces, facilities and resources for young children and families; this was also evident in the research team’s observations of the town’s outdoor play spaces. However, the perception of young children as being invisible is shared by parents attending playgroup in Crayton, a town that is otherwise seen by some of its citizens as well-positioned in its resources for young children:

I suppose cause they’re not talking, they’re not interacting, they can’t really do much, [the town] don’t really see them as a person until they do start walking and talking and going to school.

School was frequently mentioned, in all three towns, as the place where children began to ‘be seen’. This often led to the suggestion that it would be desirable for school grounds and resources to be more open to the community and welcoming to families with younger children. Issues that participants perceived as contributing to the invisibility of young children include: the isolation of some families; the lack of public transport in regional areas; the unforgiving climate in the winter months; the paucity of welcoming play spaces equipped with facilities such as toilets; and the perceived preference of families of diverse cultures to avoid planned events such as playgroup.

Where children were instead perceived as being visible, this often involved concerted efforts on the part of families and/or early years educators/gatekeepers to plan and publicise events and to bring the children into town. Oakup for example was perceived by most participants to be a welcoming town for young children and families: as one parent mentioned there is a ‘genuine interest in you and your children’. Another parent who had recently moved to the town agreed and noted the importance of gatekeepers to welcome new families: ‘knowing one person here made it easier. I was told about the Facebook page … [where] you can ask questions; people post on there’. The director of the early learning centre in Crayton mentioned the educators’ efforts to take ‘the children out visiting the wider community, the different shops in town’: during these outings, the children from the centre were warmly welcomed, leading to the director’s perception of the community as hospitable for young children, with children being seen as ‘valued contributors’.

The general implication seemed to be that, unless there were community gatekeepers passionate about making young children visible and providing opportunities for visibility, children aged birth to five years (and their families) were essentially forgotten until they stepped into the school.

Narratives of sitting still/being active

The perception of school as the first place where children are ‘seen’ begs the further question of how children are seen. Our data indicates that there was much concerted effort, across all three towns, to prepare children for a school context that is perceived to be increasingly demanding. There was general agreement amongst some interviewees that both teachers and parents should take initiative towards ‘readying’ children for school—as this excerpt from an interview with two parents attending playgroup in Crayton attests:

[On why parents come to playgroup] they want their kids to be interacting with other kids, ready-ing them for school [Parent A].

Everyone … is all into getting them started a lot earlier, I think there’s a lot more expected of them by pre-primary … It’s an hour a week [at the Primary School] this term, once a week, getting them prepared [Parent B].
The proliferation of programs of an hour or so once a week focusing on narrow skills (as one parent notes, 'pencil grips and things') and preparing children to sit still seems to us to be greatly at odds with the vision of increased quality and access inherent in the early childhood reform in Australia. Furthermore, there is the perception that much of teachers' time will have to be spent teaching the children to sit still and that this is a desirable and legitimate pursuit:

The Australian Curriculum is coming in so there is a big push for children to reach a certain standard by a certain age … In society now our children don't have as much structure as they did in previous ages so our children do not know how to sit still. So it takes a long time for teachers to teach them how [Oakup parent/Education Assistant].

From the perspective of the Crayton Primary School Deputy Principal, this reflects a pressure placed on schools: 'a lot of schools now are under pressure to stop that play as we are meant to be having pre-primary kids reading and writing'. On the other hand, the focus on learning to sit still and 'stopping play' contrasts with the desire expressed by many participants to enhance facilities and opportunities in their town for young children to be active in a natural environment: '[we need] more nature-based playgrounds … [and] sensory gardens as well' (Crayton School Primary Principal). The desire to establish nature-based play spaces and other settings for active play was prevalent across all three towns; it was also evident that living in regional towns was perceived as a lifestyle choice to afford more space and physical activity to young children. In Oakup, many of the comments that painted the town as welcoming and hospitable to young children were related to the availability of play spaces that fostered physical activity and the opportunity for families to live a semi-rural lifestyle; in this town, 'being active' was generally privileged over 'sitting still'. Overall this seemed to lead to more hopeful discourses around childhood; for example, there was very little concern or interest among Oakup participants about AEDI scores or other quantitative measures, rather they seemed more intent on emphasising the general welcoming feel of the community and its attention to valuing young children.

Narratives of conformity/diversity

All three towns had one or more playgroups, an informed librarian/library offering programs specifically for young children and gymnastics programs for young children hosted at the local recreation centre. The quality and accessibility of play spaces for families with young children to serendipitously meet outdoors was varied, as was access to and availability of early years settings such as long day care and family day care—but all these opportunities existed in all towns. Notwithstanding these similar landscapes, only in one town did we feel compelled to add a further theme—'diversity'—to our analysis: Karrak—the most diverse town of the three and, incidentally, the town with continued high vulnerability across both AEDI data collection periods. In response to our question on what she might perceive as reasons for the town's continued high vulnerability results, the Karrak School Pre-Primary Teacher stated:

It's the transience and it's the [multi]cultural area. The fact that it's quite a [multi]cultural area and family are looking after [the children] and part of that is doing everything for them.

This teacher perceives [multi]culture to be a deficit and presents conformity (or change in values) as desirable:

We've talked about the culture—in the gross motor— ... when you have carers who are Italian mums. When I see how much the mums and the grandparents are doing for the children, they're not getting that gross motor, they are not climbing the trees, they are not getting all those things they need to have to get those skills. It's cultural. There is so much love. But they don't know what they don't know. So they are still being carried in and they are very tidy and they are very clean and they tidy up. … It is changing.

It can be inferred that there is a risk of cultural bias in the interpretation of any developmental measure; while this is only one teacher's perception, she is one of only two teachers of children attending their first year of full-time schooling in the small town of Karrak so is likely to have assessed a large percentage of the cohort of children for the AEDI. Parents in Karrak also acknowledge that the decision to participate in or avoid 'mainstream' early childhood activities such as playgroup is influenced by culture and values; 'you know, was it part of their childhood??'. I go to playgroup because my mum took me to playgroup and that this relates to conformity—it's the thing to do … because you can have all the things in the world but people might not use them depending on their own experiences'. It was only when adding the Thomatic dimension of diversity in response to the data collected in Karrak that the research team realised the prevalence of discourses of conformity elsewhere and we reflected how events such as playgroup are normatively constructed. This is exemplified by the following comment from the Shire Manager in Oakup, a town where not much mention was made of diversity and most participants perceived their community as welcoming: 'there's a spattering of the normal, you know the library morning readings programs, the playgroups, so they can choose to do that'. Where the 'spattering of the normal' meets a population that conforms and shares similar values, 'they' might very well make the choice to participate. When instead that 'spattering' encounters a diverse population, as the Karrak parents above suggest, 'they' might choose not to participate. It is tempting then to construct avoidance as a deficit and to view conformity as the solution, thus excluding those who do not fulfil the promise of normality:

I have a lot of Italians in my classroom, of that generation, and ... in my meetings I tell them this is what I would like you to do, not because [the teacher] says, but because it will help your child [Karrak School Pre-Primary Teacher].
However, some participants suggest that a more effective approach may be to listen, to consider alternative options and to be compassionate:

“You can have all the services in the world but if they don’t access them, we don’t know why they don’t. It is just guesswork unless you can figure out who they are and asking them” [Karrak Community Development Officer].

Now we’ve got everybody which is wonderful for the community but they have issues because of their visas and stuff and it’s not easy for them, it’s a hard life [Karrak Institute of Technology Lecturer].

An approach to shared lives which honours diversity and privileges listening, affords a more hopeful discourse within processes of transformation such as those occurring in ECEC in Australia today. The voices gathered by our research team suggest that we have a choice to encounter this time of transformation as an opportunity for pushing conformity or rather as a gifted possibility to honour diversity, to listen and to be compassionate.

A trajectory of hope

Hope is a connective theme (Giamminuti, 2013) and useful construct for our research, for across all three towns the conversations around young children always leaned towards hope: children’s invisibility (a narrative of political risk) was always countered by gatekeepers’ efforts at creating visibility (a narrative of hope); the pressure to make children sit still (a narrative of salvation) was countered by the desire to afford them and their families diverse opportunities for encounter and places to be active (a narrative of hope); and the discourses of conformity (narratives of salvation and political risk) were countered by fostering attitudes of listening and compassion (narratives of hope). We propose here that the early childhood sector could harness the power of grassroots critical action, enlisting the support of all citizens by privileging hopeful narratives of childhood as opposed to narratives of salvation and political risk. Harnessing collective wisdom could afford the ECEC sector the opportunity to counteract the ‘fragility’ of major change initiatives (Tayler, 2011).

Collective wisdom

A more recent critical analysis of the NQF constructs the reforms as ‘a lost opportunity for transforming ECEC in Australia in ways that would enhance quality and outcomes for children’ (Fenech et al., 2012, p. 10). This critique could indicate that landmark reforms are in need of concerted grassroots support alongside strong political legitimacy (Tayler, 2011); we propose that privileging narratives of hope could be one way to transform cultural images of childhood. ‘Narratives of hope seek to address inequities through transforming social structures that perpetuate those inequities’ (Sumsion et al., 2009, p. 7); the social structures that can be transformed here relate to the existing invisibility of early childhood professionals and settings, and the alternative possibility of collective wisdom (Malaguzzi, 1998).

We suggest therefore that the space for critical action, informed by critical imagination and supported by critical literacy (Sumsion, 2006), may lie at the crossroads of hope. A community or town, through grassroots critical action, can privilege narratives of hope over the dominant narratives of salvation and political risk. Contexts of hope may be created, where the possibility is offered to everyone to share a commitment to transformational policy; early childhood settings can emerge from their place of invisibility through collective wisdom, as happened in the history of the city of Reggio Emilia, where the acclaimed early childhood services constitute a source of pride, responsibility and hope for the entire city (Delrio, 2011, 2012).

Re-imagination of childhood

Carla Rinaldi, president of Reggio Children and ‘thinker in residence’ in South Australia in 2012–2013, exhorts Australia to ‘re-imagine childhood’ (2013). Rinaldi denounces the fragmentation of early childhood services and the implications this has for the ways in which childhood is constructed; she envisages other possibilities for Australian contexts when she conceives of a city or town as ‘a community, an educating city … that educates citizens but also can be educated and changed by its own inhabitants’ (2013, p. 23). We could see in our study that opportunities for constructing ‘educating towns’ existed and could be harnessed. This collective re-imagination is nurtured by visibility; where children are not visible the opportunity for activating hope is diminished, whereas creating opportunities for towns to view children as participatory citizens generates possibilities for critical activism. For example, Malaguzzi (1998) recounts how, at the beginning of their experience, the educators in Reggio Emilia would ‘transport the school to town’ (p. 52) by teaching school and showing exhibits in the open air, thus gaining grassroots support for their burgeoning innovative educational project. The exhibits in the town turned into a highly acclaimed travelling exhibition which ‘has been telling the story of the Reggio Emilia educational experience worldwide to thousands of visitors for over twenty-five years’ (Reggio Children, 2009) and speaks not only to those involved in education, but ‘to all members of the general public who believe that safeguarding educational processes and their evolution is of fundamental importance for society’ (Reggio Children, n.d.a). The far-reaching impact of the educational project of Reggio Emilia is a striking and provocative example of the possibilities of harnessing grassroots support. The efforts by Reggio Emilia educators to make young children’s competencies visible have led to practical responses such as: increased support from the community; concerted attention to children; generous funding for the educational project from the local municipality; and growing international acclaim.

In this example of the south-west of WA, similar parallels can be found between towns’ perceptions of young
The field of Childhood Studies argues that images of children and childhood are constructions—cultural and historical views that are open to interpretation and change (James & James, 1998; Qvortrup et al., 2009). Furthermore, participants in Oakup were generally unconcerned about quantitative measures such as the AEDI and overwhelmingly perceived their town as being welcoming to young children and their families. This perception was influenced by the existence of a playground in the centre of the town, the outcome of a single philanthropic donation to fund the construction of a play space for children, which draws young children and families to this town from surrounding areas and was consequently viewed by participants as a special meeting place. Further practical implications emerging from this study which are particularly relevant to DSR include: re-configuring recreation centres in regional communities as early years hubs; identifying and fostering relationships with cultural champions around child-friendly practices; working with local government authorities to identify, value and activate natural environments as play spaces for young children and meeting places for families; and encouraging nature play specialists to differentiate and promote the inclusion of young children in design and delivery of play spaces (Buckley et al., 2013).

The image of the child is above all a cultural (and therefore social and political) convention that makes it possible to recognize (or not) certain qualities and potentials in children, and to construe expectations and contexts that give value to such qualities and potentials or, on the contrary, negate them.

Inevitably, narratives of salvation and political risk, focused as they are on deficit images of children, breed contexts where children’s qualities and potentials risk being negated; this can be further illustrated through our own themes. It is evident in fact how narratives of conformity align with narratives of salvation in breeding deficit images of diverse children and their families: the pre-primary teacher in Karrak for example, who states: ‘this is what I would like you to do, not because [the teacher] says, but because it will help your child’, believes that she can save the deficit families, thus negating the qualities and potentials that are inherent in their being ‘different’. It is also evident how proponents of narratives of political risk (such as narratives of invisibility and narratives of sitting still) can present these constructs as seemingly reassuring ground for compliance and success. By learning to sit still the children will be prepared to meet the demands of a new world and the teachers will fulfil their professional obligations by preparing them to sit still; by not seeing young children ‘as a person until they do start walking and talking and going to school’, those in power can protect themselves from the risky and uncertain territory of recognising children as active citizens with participatory rights. There is a risk that, in perpetuating these deficit narratives, the bold vision of early childhood reform in Australia will be lost. Instead, hopeful narratives such as visibility, activity and diversity create fertile contexts for giving value to young children’s qualities and potentials, nurturing a collective re-imagination of childhood. In summary, at this time of extensive reform, a fertile opportunity is available to Australian communities to resist dominant narratives of salvation and political risk and to swing the pendulum towards narratives of hope. Our study of three towns evidences an embryonic desire towards a narrative of hope.

**Conclusion: Observing children admiringly**

Building on the ‘insider perspectives’ of members of the EYLF Consortium (Sumson et al., 2009), this article has added its voice to narratives of hope. We argue that to be positioned on a collective trajectory of hope affords the possibility for towns to construe expectations and contexts that give value to young children. This approach affords children and their families the possibility to feel welcomed and may lead communities to a collective re-imagination of childhood—or, as the mayor of the city of Reggio Emilia suggests, to observe children ‘admiringly’:

> *This child of ours is a citizen, a competent citizen, a child who knows how to be a part of the city, and who I as Mayor continue to observe admiringly* (Delrio, 2011, p. 9).

For the vision of the landmark Australian reforms to thrive and survive we could harness the ‘critical imagination’, ‘critical literacy’ and ‘critical action’ (Sumson, 2006) of all those who share their daily lives with children and those who encounter them in towns, cities, neighbourhoods and communities. This is an invitation to citizens to observe children ‘admiringly’ and transform their own narratives along a trajectory of hope, expressing many declarations against the betrayal of children’s potential and re-imagining childhood (Rinaldi, 2013). With the help of this collective wisdom, the narratives of hope may overcome the pervasive and powerful narratives of salvation and political risk, fulfilling the bold and ambitious ‘promise of a new era’ (Fenech et al., 2012, p. 5).

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References


The voice of the child in early childhood education research in Australia and New Zealand: A systematic review

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This literature review covers journal articles reporting early childhood education (ECE) research in Australia and New Zealand in the past 10 years and it has found that: (1) Nearly half of the articles lacked child-related data with an explicit or implied justification, while less than one-tenth failed to include child-related data with no justification; (2) Over one-third of the articles addressed the voice of the child, while less than one-tenth included child-related data for assessment purpose. A typology of the voice of the child has evolved from the review and it includes: pseudo voice (engendered by assessing the child), inferred voice (engendered by inferring the child’s perspective), surveyed voice (engendered by surveying the child) and co-constructed voice (engendered by co-construction of lived experience and understanding with the child). In spite of the evidence from the articles that the voice of the child had generally been recognised, the review has identified a gap between the child’s voice rhetoric and research practice. It is argued that the distinction between rhetoric and practice should be recognised and respected.

Introduction

The concept of the voice of the child in research originated from Article 12 of the United Nations Convention on the Rights of the Child (UNCRC) which provides that: ‘States Parties shall assure to the child who is capable of forming his or her own views the right to express those views freely in all matters affecting the child, the views of the child being given due weight in accordance with the age and maturity of the child’ (UN, 1989). After more than two decades, the assumption has prevailed in social studies that children were competent research participants whose views deserved to be taken seriously (Hunleth, 2011) and that even children with little or no speech had a voice (Schnoor, 2012).

Researchers have adopted different approaches to ‘listening to’ the child, one being the Mosaic approach developed by Clark and Moss (2001). The Mosaic approach was characteristic of the use of multiple methods to research children’s perceptions and views, as Greenfield (2011) understood, ‘[it] is about piecing together multiple types of data to help understand children’s views’ (p. 110). The approach involved the use of a range of tools, such as observations, photography, bookmaking, tours, map-making and interviews. It sought to bring together different pieces of information to create the whole picture from the child’s viewpoint (Clark & Moss, 2001). In particular, largely due to the limited speech ability among most preschool children, visual methods, including drawing and photo-elicitation, had been found to be effective in capturing the child’s voice (Eldén, 2012; Hunleth, 2011).

However, issues have arisen in research practice. Some researchers assumed that voice research with children was by definition good, valuable, or of high quality (Spyrou, 2011) and they tended to ‘quickly analyse by extracting quotes from children to illustrate their findings … [which might] end up caricaturing children’ (Spyrou, 2011, p. 157). According to Komulainen (2007), ‘listening to children is not necessarily “good” but may be, in fact, intrusive and the cause of further distress: more listening may not inevitably mean more hearing’ (p. 25). Komulainen questioned whether ‘listening to children’ in social research is only ‘a rhetorical device’ (p. 26). Addressing the limitation of oral accounts which disadvantaged children with limited language, Warming (2011) observed: ‘Inclusive strategies designed to cater to children’s different preferences and abilities still risk favouring verbally inclined children, and thus reproducing symbolic violence towards less verbal children’ (p. 50). Another issue is whether and to what extent researchers should pursue authenticity of the voice of the child. Eldén (2012) contended that the drawing methods ‘do not aim to uncover “authentic” voices of the participating children, but rather, are crucial in allowing
the complexities of children’s narratives on care to emerge’ (p. 67). Spyrou (2011) believed that researchers ‘need to move beyond claims of authenticity and account for the complexity behind children’s voices by exploring their messy, multi-layered and non-normative character’ (p. 151). These unresolved issues call for a shift of our attention from rhetoric to practice, from the why to the how. This systematic review of the studies was aimed ‘to distinguish rhetoric from practice’ (Komulainen, 2007, p. 24) by mapping the status quo of the research practice with regard to the enactment of a child’s right to have a voice in research.

Methods
The methodology of this study was a systematic review. Systematic reviews use ‘explicit and rigorous criteria to identify, critically evaluate and synthesise all the literature on a particular topic’ (Cronin, Ryan & Coughlan, 2008, p. 39) and are ‘valuable summaries of the research evidence base and as such play a key role in evidence-informed decision-making’ (Stewart, 2014, p. 588).

‘ECE research in Australia and New Zealand’ was defined in this study as primary research in ECE conducted and reported in Australia and New Zealand. In this study, ‘primary research’ involved original primary data collected by the researcher. Given academic journals are the predominant vehicle for reporting primary research, adopting Cronin and colleagues’ (2008) criterion of currency for inclusion of articles in a literature review (i.e. at most, the last 10 years), the scope of this review was confined to the relevant academic journals in Australia and New Zealand between 2005 and 2014.

A two-stage selection process was completed prior to analysis—‘selection of journals’ and ‘selection of articles’ from the selected journals.

Stage 1. Selection of journals
Since publication of ECE research was not limited to journals specialising in ECE, journals relevant to both early education and education in general were considered. The Australian Education Index (AEI) database was searched, which resulted in a list of 42 journals published in Australia in early education as well as education in general. A list of 25 journals published in New Zealand in both early education and education in general was obtained from the National Library of New Zealand. Further screening of journals was performed by eliminating specialised journals that were apparently not relevant to the research topic (e.g. library, adult, higher education), which reduced the number of the Australian journals to 25 and that of New Zealand journals to 16.

Stage 2. Selection of articles
Utilising major electronic databases (e.g. A+ Education, ProQuest, EBSCO), content pages and all article abstracts of each selected journal were examined for relevant articles. For an article to be selected, all four relevance criteria had to be met: (1) The article was peer-reviewed; (2) The article was reporting primary research that involved independent data collection; (3) The article was reporting primary research that was conducted in Australia or New Zealand; and (4) The article was reporting primary research in the early education area (from birth to five years). The majority of selected journals and their full-text articles were available on an electronic database with only a few exceptions where academic libraries were used. Consequently, 381 articles (219 Australia, 162 New Zealand) from 21 journals (14 Australia, seven New Zealand) were selected.

Table 1. Classification of the journal articles reporting ECE research in Australia and New Zealand

<table>
<thead>
<tr>
<th>Category</th>
<th>Feature</th>
<th>Number</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1</td>
<td>Child-related data exempted</td>
<td>181</td>
<td>47.5% The article was focused on a topic that was not significantly affecting the child (e.g. professional development, leadership, placement etc.), or it disclaimed that the child’s perspective was not included by, for example, including relevant words in the title of the article (e.g. ‘teachers’ perspective on …’, ‘parents’ perception of …’).</td>
</tr>
<tr>
<td>Category 2</td>
<td>Child-related data absent</td>
<td>36</td>
<td>9.4% The article failed to include child-related data without making a disclaimer or giving a reason.</td>
</tr>
<tr>
<td>Category 3</td>
<td>Child-related data present for assessment of the child</td>
<td>32</td>
<td>8.4% The article included child-related data for the purpose of assessing learning and development of the child rather than obtaining the child’s perspective.</td>
</tr>
<tr>
<td>Category 4</td>
<td>Child-related data present for the voice of the child</td>
<td>132</td>
<td>34.6% The articles included child-related data for the purpose of obtaining the child’s perspective.</td>
</tr>
</tbody>
</table>
Preliminary analysis

A preliminary analysis was conducted to assess each article on: (1) Inclusion of the child-related data; and (2) Link between the child-related data and the voice of the child. As a result, the articles were classified into four categories, as shown in Table 1 on page 98.

Table 2 provides a breakdown of individual journals’ contribution to each of the four categories of the articles.

Further analysis and findings

A more focused analysis was performed to determine the nature of the linkage between the child-related data and the voice of the child. As shown in Table 1, the Category 1 and 2 articles did not include any child-related data and therefore were excluded from further analysis. The details of data collection in each of the Category 3 and 4 articles were examined against the findings of the research to determine how the voice of the child was engendered. Four generic types of the voice of the child were formulated from the analysis: pseudo voice (engendered by assessing the child), inferred voice (engendered by inferring the child’s perspective), surveyed voice (engendered by surveying the child) and co-constructed voice (engendered by co-constructing the lived experience and understanding of the child).

Type 1. Pseudo voice—assessing the child

The Category 3 articles included child-related data which was collected on the child rather than with the child. This type of child-related data was only used for assessment results and had little to do with the voice of the child as a researcher. The main form of assessments reported in the Category 3 articles were standardised or norm-referenced assessments (e.g. Colmar, 2011; Gould, 2012; Oakley, Howitt, Garwood & Durack, 2013; Reynolds, Kidd & Stagnitti, 2011; Van Bysterveldt, Gillon & Moran, 2006; Young, 2009). The standardised assessments served a range of purposes, including physical (Lucas & Schofield, 2010), physiological (Callcott, 2012; Sims, Guilfoyle & Parry, 2006), psychometric (Piek, Bradbury, Elsley & Tate, 2008) and academic (Hong & Kemp, 2007; McDonough & Sullivan, 2011).

Table 2. Individual journals’ contribution to the four categories of the articles reporting ECE research in Australia and New Zealand

<table>
<thead>
<tr>
<th>Journal</th>
<th>Category 1</th>
<th>Category 2</th>
<th>Category 3</th>
<th>Category 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australasian Journal of Early Childhood</td>
<td>78</td>
<td>24</td>
<td>9</td>
<td>44</td>
<td>155</td>
</tr>
<tr>
<td>NZ Research in Early Childhood Education</td>
<td>37</td>
<td>2</td>
<td>5</td>
<td>21</td>
<td>65</td>
</tr>
<tr>
<td>Early Childhood Folio</td>
<td>22</td>
<td>3</td>
<td>2</td>
<td>36</td>
<td>63</td>
</tr>
<tr>
<td>International Research in Early Childhood</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td>Education</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>Early Education</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Australian Journal of Learning Difficulties</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Asia Pacific Journal of Teacher Education</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Australian Education Researcher</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Australian Journal of Language and Literacy</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>International Journal of Disability, Development and Education</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>NZ Journal of Teachers’ Work</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Waikato Journal of Education</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Australasian Journal of Gifted Education</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Australasian Journal of Special Education</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Australian Journal of Indigenous Education</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Education Research and Perspectives</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Journal of Educational Enquiry</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Teaching Science</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Curriculum Matters</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>181</td>
<td>36</td>
<td>32</td>
<td>132</td>
<td>381</td>
</tr>
</tbody>
</table>
Many Category 3 articles included informal ‘authentic assessments’ that were ‘recordings of developmental observations over time by familiar and knowledgeable caregivers about the naturally occurring competencies of young children in daily routines’ (Bagnato, 2007, p. 27). Examples of authentic assessment from the Category 3 articles included: naturalistic observations (Ulloa, Evans & Parkes, 2010), non-participant observation of children’s play and interactions (Mawson, 2010; Meade, 2012), videotaping of children’s interactions with caregivers (Douglass & Stirling, 2012), families with a focus on children (Fleer & Hammer, 2014) and toddlers’ actions and interactions (Lee, 2012). Similar to standardised assessments, authentic assessments reported in the Category 3 articles were conducted to ‘assess’ the child rather than ‘listen to’ the child.

As reported in some Category 3 articles, some traditionally voice-engendering modes of data collection functioned as an assessment that engendered no voice. For example, the Piagetian clinical interview with children aged five to eight years in Warren, Cooper and Miller’s (2012) study was conducted to assess the children’s mathematical ability and the interviews consisting of mathematical tasks conducted by Warren and Miller (2010) were in effect assessments. The visual methods considered to be a preferred way of listening to the child (Eidén, 2012; Hunleth, 2011) were used as assessments. For example, in Wills’ (2012) study, photographs, video and a digital diary were used to create a record of the child’s learning capabilities.

Type 2. Inferred voice—inferring the child’s perspective

In many Category 4 articles, researchers deduced or inferred the child’s view on the matter being researched by observing the child’s behaviours and interpreting the child’s previously created work samples. The observations engendered by this type of voice were ‘unobtrusive’ and ‘non-participatory’ (Howitt, Lewis & Upson, 2011). However, since the purpose of the non-participatory observations here was not to ‘assess’ the child but to ‘figure out’ what the child was thinking about in regard to the subject matter, they were distinct from the non-participatory observations engendering the pseudo voice (Type 1) as described above. It should be emphasised that the child’s work samples (e.g. drawing, photo, portfolio etc.) selected for analysis and interpretation were not purposefully ‘created’ as part of the research process, as is the case with the participant-elicited documentation engendering the co-constructed voice (Type 4) to be discussed below. The selected work samples were part of the pedagogical documentation based on which the researchers made inferences about the child’s perspective. In the Category 4 articles, examples of such documentation included: written artefacts (McDonald, 2005), spontaneous drawings (Lambert, 2005), portfolios (Mawson, 2011a), learning stories (Archard, 2013; Wilson-Tukaki & Davis, 2011), photo narratives (Goodfellow, 2012), drawings, observational diaries (Vaealiki & Mackey, 2008) and the phenomenological approach (Lewis, Mansfield & Baudains, 2010).

Type 3. Surveyed voice—surveying the child

In some Category 4 articles, verbal language was the principal vehicle for the researchers to survey the child’s voice on the subject matter of the research. McDonald and Howell (2012) used a survey that was presented to the child in simple language and was read aloud to them, to obtain the child’s opinions. A predominant proportion of the surveys described in the Category 4 articles took the form of interviews. Since interviews were also used as assessment occasionally, as mentioned above, ‘surveying the child’ instead of ‘interviewing the child’ was chosen to be part of the title of the Type 3 voice. The articles used a wide range of terms to refer to the interviews that were aimed to survey the child: informal conversations (Grant, 2013; Smith, 2012), informal discussions (Gibbons, 2005), conversations (Vaealiki & Mackey, 2008), talking (Barker, 2010), interviews (Deans, Frydenberg & Tsurutani, 2010; Haggerty, Simonsen, Blake & Mitchell, 2007; Hedges, 2011; Wainman et al., 2012), interviews and conversations (Clarke-Phillips, Paki, Fruean, Armstrong & Crowe, 2012), conversational interviews (Te One, 2010a) and semi-structured interviews (Briggs, 2007; Hesterman, 2011; Mirkhil, 2010; Prince, 2012).

Some researchers surveyed the children in groups. Again, different terms were used for such non-individual interviews: focus group interviews (Drummond, 2012), focus group discussions (O’Neill, Urlichs, Fleer, Agbenyega & Ozanne-Smith, 2013), guided group discussions (Nyland, Deans, Acker & Ferris, 2013), group discussions (Blaise, 2010), group interviews (Edwards & Catter-Mackenzie, 2011), focus-groups and semi-structured interviews (Peters, Hartley, Rogers, Smith & Carr, 2009). It should be noted that, when significant ‘interference’ or ‘intrusiveness’ by the researcher occurred, the group interviews would involve co-construction and engender the Type 4 voice (as described below).

Type 4. Co-constructed voice—co-constructing the lived experience and understanding of the child

Unlike the unobtrusiveness of non-participant observations characterising the child-related data engendering pseudo voice (Type 1) and, depending on the purpose of data collection, inferred voice (Type 2), the observations employed to engender the co-constructed voice (Type 4) were participatory and obtrusive. This form of participatory observation involved not only observation but also co-construction of the child’s lived experience. Co-constructed lived experience, along with shared understanding or intersubjectivity, was a distinctive feature of the child-related
data engendering the Type 4 voice. A typical example of data collection leading to such types of voice was the ethnographic approach featuring participant observation (Due & Riggs, 2011; Hedges, 2008; Hesterman, 2011; Mawson, 2011b; White, 2008). Some methods of the Mosaic approach described in the Category 4 articles provided more examples: photography, photo-book making, child-led tours, map-making and ecocultural child interviews (Baird, 2013); children being asked to produce a drawing of their first day at school and attend focused discussions (MacDonald, 2009); collaborative drawing, discussions on photographs taken with disposable cameras (Greenfield, 2007); children’s photographs and discussions and the researcher’s interactions (Richards, 2009); themed drawing, painting and storytelling (Harris & Manatakis, 2013).

Discussion

The classification of the articles depicted a big picture of the status quo of child-related data in ECE research in Australia and New Zealand. The creation of Category 1 acknowledged the fact that not all early childhood research ought to include the voice of the child. If the research topic was not affecting the child significantly, or if it was stated that the focus of the research was on the adults’ voice only, then the voice of the child could be ‘exempted’. Such a category legitimised silencing of the child’s voice in certain research, which highlighted a natural gap between the voice rhetoric and research practice. In a broad sense, all matters being researched in ECE are ‘matters affecting the child’ (UN, 1989); however, given the priority of a research project at the time, the significance of such ‘affecting’ should be considered.

The typology that evolved from the review of the Category 3 and 4 articles provided a conceptual framework for understanding the ‘quality’ of the voice of the child in current ECE research. The typology excluded adults ‘speaking for children’ as described by Peters and Kelly (2011) because I believed consulting parents and teachers on what the child’s perspective was should be counted as an adult’s voice. Obviously, the pseudo voice (Type 1) should not be counted as the voice of the child at all, although it was certainly valuable for the research in other senses. The other types of voice were conceptually distinct, but in practice, according to the articles reviewed, they were ‘muddled up’ most of the time. It is important to point out that the typology is not a hierarchical structure with one type superseding another. Whether one type of voice is more reliable or valid than the other type depends on many contextual variables which are beyond the scope of this article. By the same token, a question remains whether and to what extent these types of voice are compatible. There was an overall lack of information on how the different types of voices were mediated in the articles.

The inferred voice (Type 2) seemed to have featured the infants who had limited or no speech ability, which echoed Schnoor’s (2012) remark, ‘… even children with little or no speech mostly do have a voice … Analyses of field notes delineate a range of observable vocal phenomena and respective social practices of “giving voice” in a crèche and detect both various strategies of verbalisation as well as strategies of practically dealing with children’s hearable voices’ (p. 458). The articles reviewed confirmed that even infants under the age of two were able to give their voices (Duncan, 2005; Goodfellow, 2012; Podmore & Taouma, with A’oga Fa’a Samoa, 2006; Te One, 2010b). This type of voice should be distinguished from the pseudo voice (Type 1) where observation was to ‘measure’ the child rather than to ‘infer’ what the child would think about the topic. Whether and to what extent the inferred voice is congruent with the real voice depends on a number of variables, including, but not limited to, how well the researcher understands and empathises with the child.

The surveyed voice (Type 3) appeared to be the most straightforward way of listening to the child. The articles reported many three- to five-year-old children being interviewed. Keeping in mind the age appropriateness of the interview questions, I was interested to know how the researchers ‘manoeuvred’ the interviews. There was a lack of information on the details of the interview processes in the articles. Furthermore, the analytical procedures showing how the interview data translated into the voice of the child were either not reported or not sufficiently reported in the articles. Peters and Kelly (2011) discussed occasions of researchers ‘filtering and shaping children’s voices’ (p. 23) even when the child was spoken to directly, which reminded me that some of the voices of the children reported in the articles might have been ‘filtered’ or ‘shaped’ by the adults. I was wondering about the boundary between such ‘filtering and shaping’ and ‘co-construing’ for the co-constructed voice (Type 4). I was also wondering to what extent the child being interviewed understood the interview questions. Apparently, for some topics, the child did not understand the subject matter (Richards, 2009) and was incapable of providing any voice on the topic (McDonald, 2005). Further, the child might ‘choose not to speak or not to speak about the research topic’ (Peters & Kelly, 2011, p. 24). Such issues remained unaddressed in the majority of the articles.

The socioculturally rooted notion of ‘co-construction’ is currently prevailing in ECE research in both Australia and New Zealand. Despite its profound philosophical connotations, in the research practice where the voice of the child is advocated for, ‘co-constructing’ should be seen as a technique—for example, how do we co-construct? The co-constructed voice (Type 4) was related to many of the methods that allowed the researchers to ‘co-construct’ with the child. In the Category 4 articles, researchers co-constructed the voice of the child through
two avenues: co-constructing the child’s lived experience and co-constructing the child’s understanding of the co-constructed lived experience. Originating from the sociocultural perspective, the currently popular Mosaic approach to ‘listening to’ the child in research was characteristic of co-constructing, although it does include a range of methods.

In order to address the child’s voice, as shown in the reviewed articles, researchers resorted to many methods. However, it appeared to me that the voice of the child claimed in some of the articles was tokenistic. The ‘a-little-bit-of-everything’ tactic of data collection did not seem to work well for capturing the voice of the child. Children’s ‘one hundred languages’ (Spaggiari & Rinaldi, 1996, cited in Hesterman 2011) for pedagogical documentation does not mean 100 data collection methods that are effective in the voice research. It is paramount for the researcher to understand the linkage between the data and the voice. To put it another way: the mechanism of how the child-related data translates into the voice of the child should be explored. The typology that evolved from this literature review provides a scaffold for achieving such understanding.

**Limitations and directions for future research**

Several limitations should be noted. The 10-year time frame was debatable. It would be beneficial to include articles published before 2005, particularly since 1989 is when the UNCRC was published. By the same token, it was a limitation to exclude articles published in other countries. It was not unusual that the research conducted in Australasian early childhood settings was published elsewhere. Similarly, focusing on the peer-reviewed journal articles could have excluded some important relevant research reports such as doctoral theses, conference presentations and monographs. Another limitation was the absence of ethical considerations from the scope of the review. Due to the different requirements of journals and the writing style of individual researchers, only very few articles covered the ethics, which would have invalidated review of this aspect given the complex nature of the ethics for voice research. For example, obtaining the child’s consent and/or assent (Birbeck & Drummond, 2007; Harwood, 2010). Future research to address these limitations may include expansion of the range of reviewed articles, both chronologically and geographically. In addition, future work may attempt to tackle more in-depth issues relating to the typology of child voice formulated in this study. For example, apart from the ethics issue which should be looked into closely, the likelihood of a link between certain factors (e.g. age of the child, background of the researcher) and certain types of child voice should also be explored.

**Implications**

Enacting the rights of the child is important in rhetoric but difficult in practice. There have not been criteria of reliability and validity for the voice of the child, let alone a formula for capturing reliable and valid child voice. Tokenistic child voice is not only unnecessary but also misleading. Compared to the absence of the voice of the child from a study, misrepresented voice of the child is probably more worrying. It is good practice that the researchers disclaim in the report if the child’s voice has not been sought, which seems to be a good way to bridge the gap between rhetoric and practice. To prevent misrepresented voice of the child, the researcher should take a realistic, honest approach rather than a ‘politically correct’ one. It should be considered to be good practice to acknowledge the difficulty and even failure in listening to the child in a study. Also, the researcher should acknowledge if the child voice has somehow been ‘filtered’ or ‘shaped’ and make the effort to avoid what Spyrou (2011) termed as ‘caricaturing children’ (p. 157). Further, to safeguard the quality of the research involving the voice of the child, it is important to include in the report sufficient information on how the child-related data was collected, how the child was analysed and how this was reflected in the findings.

**Concluding notes**

Based on the quantitative classification of journal articles reporting the primary research in Australian and New Zealand ECE, the systematic review revealed that the voice of the child was evidential and that a natural gap existed between rhetoric and practice. The typology of the voice of the child that evolved from the review highlighted the heterogeneous nature of the child-related data reported in the reviewed articles. The Type 1 voice (pseudo voice) emanated from studies that included assessment of the child which did not engender the voice of the child as a researcher, although the voice was present in pedagogical senses. The Type 2 voice (inferred voice) substantiated the absence of the voice of the child from the research, let alone a formula to mediate the tension between the voice rhetoric and research practice. Each of these four types of voice is conceptually distinct, but in research practice, they were entwined with each other. Understanding the nature of each type of voice contributes to ensuring the quality of collection and analysis of the child-related data. These findings will contribute to mitigating the tension between the voice rhetoric and research practice and in particular, curbing tokenism in enactment of the voice of the child in research.
References


Background

The dual working-parent phenomenon in Singapore has seen a rising number of families turning to infant/toddler care settings. Infant/toddler care services have also been viewed as a viable option since the government enhanced the baby bonus scheme in 2004 and the family and parenthood package in 2013, which provided generous subsidies and financial assistance for these services (NPTD, 2013). While there were only 25 infant/toddler care centres in 2004, this number increased to 393 in May 2015 to meet the demand for infant/toddler care services (ECDA, 2015). Hence, with the growing number of infants/toddlers enrolled in centre-based programs, it is crucial to examine the quality of infant/toddler care in these programs.

The introduction of the Early Years Development Framework (EYDF) by the then Ministry of Community Development, Youth and Sports (MCYS) in 2011 is both timely and necessary to ensure the quality of care for infants/toddlers in Singapore. The EYDF is aimed at guiding and setting standards for quality care for infants/toddlers as well as enabling childcare staff to adopt appropriate practices and create nurturing environments to support the growth and development of infants/toddlers in centre-based programs (MCYS, 2011).

While the EYDF does spell out what actions should be taken to ensure the quality of care for infants/toddlers, it is not easy to describe or explain explicitly what quality care is for infants/toddlers. One of the reasons is that quality care is subjective in nature and varies in different cultural contexts (Ramey & Ramey, 2006). Hence, there could be many interpretations about what quality care is. However, several empirical research findings from the United States support common beliefs and practices which could constitute quality care across different cultural contexts (Ramey & Ramey, 2006).

Quality care for infants/toddlers

Research into what constitutes quality care for infants/toddlers has gained momentum in recent years due to the advances made in neuroscience which support the strong association between early experiences and brain development (Huntsman, 2008). Young children's very early experiences are now seen to have a long-term impact on their ability to learn, gain confidence and relate well to others (Wittmer & Petersen, 2009).

Some recent studies which were conducted in countries such as Australia (Brownlee, Berthelsen & Segaran, 2009; Nyland, 2004), the Netherlands (Vermeer et al., 2008) and Israel (Koren-Karie, Sagi-Schwartz & Egoz-Mizrachi, 2005) have shown that quality of care for infants/toddlers in centre-based programs cannot be taken for granted. Additionally, although licensing rules may be put in place, this is not a guarantee for the quality of care being provided.
Factors affecting quality of care

Research studies have identified structural and process factors which can determine quality care (Huntsman, 2008; Vandall & Wolfe, 2000). Structural factors can be easily regulated by a country’s licensing guidelines such as group size, child–caregiver ratio and caregiver qualifications and training. Process factors, on the other hand, look at the dynamics of what actually occurs in the setting which are more vulnerable to variation such as caregiver–child interactions, caregiver–parent relationship and children’s experiences. Quality care is a result of these factors combining or interacting with each other.

The need for infants/toddlers to be challenged appropriately for optimal development calls for higher quality dynamics especially in terms of caregiver–child interactions and practices (Jamison, Cabell, LoCasale-Crouch, Hamre & Pianta, 2014). It is also noted that a caregiver’s level of qualifications and training is a better predictor of process quality than the other structural factors (Huntsman, 2008; Thomason & LaParo, 2009).

Caregivers’ beliefs and practices

There seems to be a need to go beyond custodial care to the provision of education and learning for the very young. This points to bridging the gap between care and education and advocates for infant/toddler care which integrates care and education (Bergen, Reid & Torelli, 2009). In Singapore, the term ‘educarer’ has been adopted to depict their evolving role and to emphasise the need to embed learning and development into infant/toddler care practices beyond just meeting physical and emotional needs (Bergen et al., 2009; Ebbeck & Yim, 2009).

Brownlee et al. (2009) explained that the childcare staff’s level of qualifications and training has a strong influence on their epistemological beliefs and this in turn affects their abilities to provide quality interactions and programing which will promote learning and development among infants/toddlers. Their findings showed that infant/toddler caregivers perceived the affective domain as the main determinant of quality care. This limited perception of quality is consistent with their views on training. This study has important implications in that practice is often a result of the values and beliefs that are being held in the first place. An inaccurate/incomplete perception of the dimensions of quality care can have a negative impact on actual practice. Similar findings were also found in a study carried out by Berthelsen, Brownlee and Karuppiah (2011).

In view of the above, the following research questions evolved and guided the study:

- How do childcare staff (supervisors and educarers) perceive quality care in terms of their interactions and practices with infants/toddlers?
- How do parents perceive quality care in terms of infants/toddlers’ interactions and practices with infants/toddlers?
- What is the observed nature of the educarers’ interactions and practices in centre-based programs for infants/toddlers?
- How do childcare staff (supervisors and educarers) perceive the training which they had undergone to prepare them for their interactions and practices with infants/toddlers?

The study

Although the study adopted a mixed-method approach, the focus of the study was primarily qualitative in nature as it aimed to gather rich, thick descriptive data from childcare staff and parents on their perceptions of quality care for infants/toddlers in centre-based programs in Singapore (Bogdan & Biklen, 2007). Data collected from the participants using various instruments were then analysed using an inductive approach as well as drawing on relevant literature to interpret the responses (Merriam, 2009). The themes which emerged were then organised and presented.

Informed consent was obtained from the participants for every aspect of the study and prior to the commencement of the study. Ethics approval was also obtained from the Nanyang Technological University Institutional Review Board (NTU IRB) for every aspect of the study and prior to its commencement.

Participants

Childcare centres with programs for infant/toddler care located around Singapore were approached for the study. Due to the outbreak of hand, foot and mouth disease (HPMD), only 12 childcare centres agreed to participate in the study. At the end, there were 46 participants (12 supervisors, 12 educarers and 22 parents) who contributed to the study. All the childcare staff met the minimum educational qualifications and training (professional and specialised) requirements stipulated in the then MCYS licensing guidelines as shown in Table 1.

Four supervisors had between six and 10 years and eight supervisors had more than 11 years of early childhood teaching experience. Five educarers had between one and five years, six educarers had between six and 10 years and only one educarer had more than 11 years of early childhood teaching experience. Generally, all the childcare staff had extensive experience working with young children in centre-based programs.
Data collection and analysis

Data was collected from the supervisors, educarers and parents using various instruments as follows:

**Interview:** To elicit their views, the participants were interviewed face to face using a semi-structured questionnaire.

For supervisors, educarers and parents:
- What do you think is quality care for infants/toddlers?
- Some people say that ‘care’ is more important than ‘education’ when working with infants/toddlers. What do you think about this view?

For supervisors and educarers only:
- Did you find your training program (professional and specialised) useful in your work? What areas of the program did you particularly find useful? Is there any particular area which you think could be covered more comprehensively?

**Observation:** Educarers were also observed and videotaped for an hour during three visits. Their interactions with the infants/toddlers were rated using a Checklist of interactions in the dimensions of ‘responsiveness’, ‘autonomy’ and ‘involvement’ (Henry, 1996). The three dimensions of the interaction were further broken down into 12 sub-dimensions, with a score given to each (Brownlee et al., 2009). This checklist was used in a previous study carried out by Brownlee et al. (2009).

**Video review:** Additionally, the educarers were also asked to review and comment on a video clip which showed a childcare staff member interacting with an infant/toddler. The video clip was selected from *Mia-Mia* which is used as a teacher-training resource (Macquarie University, 1996). Their views were elicited on the following:
- What do you think of the interactions between the caregiver and the infant/toddler?
- How do the interactions of the caregiver affect the infant’s/toddler’s development?
- What is your understanding of the terms ‘responsiveness’, ‘autonomy’ and ‘involvement’?

The video review was carried out in addition to the interview to further reveal the educarer’s understanding of the nature of interactions and its contribution to infants’/toddlers’ learning and development. Data from the interviews as well as the video reviews was transcribed and analysed. The themes that emerged were then reviewed in order to formulate judgements about the nature of the educarers’ belief systems (Brownlee et al., 2009, p. 459). Data collected from the educarers’ interviews and video reviews was then compared with data from the Checklist for interactions in order to formulate judgements about the extent to which their beliefs aligned with their practice. This made it possible to consider if beliefs shared in the interview were reflected in their practices (Brownlee et al., 2009, p. 460).

**Findings**

The data collected was organised and presented in detail along four main themes as follows: (1) beliefs and practices for quality infant/toddler care; (2) beliefs about training for quality infant/toddler care; (3) parent–teacher partnership; and (4) video review.

**Beliefs and practices for quality infant/toddler care**

Supervisors, educarers and parents were asked what they thought constituted quality care in infant/toddler programs. The two main themes which emerged were: (1) affective dimensions of quality infant/toddler care; and (2) programming for learning and development.

**Affective dimensions of quality infant/toddler care**

All supervisors, educarers and parents thought that quality care in infant/toddler programs was related to meeting infants’/toddlers’ physical and emotional needs such as love, attention and safe, healthy and hygienic environments as reflected in the following quotes:

- … having an educarer who really loves children and believes that having a relationship with the baby … is the most important thing … to help the child feel secure and confident (Supervisor 6).

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### Table 1. Childcare staff educational qualifications and training

<table>
<thead>
<tr>
<th>Childcare staff</th>
<th>Educational qualifications</th>
<th>Professional training</th>
<th>Specialised training</th>
</tr>
</thead>
</table>
| **Supervisor (12)** | GCE ‘O’ Level (1)  
GCE ‘A’ Level/Polytechnic Diploma (4)  
Bachelor Degree (6)  
Master’s Degree (1) | Certificate in ECCE (1)  
Diploma in ECCE (6)  
Bachelor in ECCE (5) | Certificate in Infant Training (5) |
| **Educarer (12)** | Secondary (10)  
GCE ‘A’ Level/Polytechnic Diploma (2) | Fundamental in ECCE (4)  
Certificate in ECCE (2)  
Bachelor in ECCE (1) | Certificate in Infant Training (10)  
Certificate in Nursing (1)  
Diploma in Nursing (1) |

Legend: GCE ‘O’/‘A’ Level: Singapore–Cambridge General Examination ‘Ordinary’/‘Advanced’ Level  
ECCE: Early Childhood Care & Education
... safety, cleanliness ... [and a] healthy environment ... [Have] appropriate toys [with], ... dangerous things kept away from the kids ... Appropriate tables and chairs ... Hygiene [and] ... clean our hands before feeding ... [as] children must wash their hands ... High chair, table ... Toys have to be washed, cleaned (Educarer 1).

... loving the child is quite important ... The child must feel happy ... [because] if he is happy, he will be able to learn things ... The care must be sincere (Parent 4).

When asked what their views about care and education were, eight supervisors felt that they were both equally important and four supervisors felt that care is more important. The opinions of the 12educarers were split equally—half felt education and care were equally important and the other half felt care was the more important aspect. A few parents (n = 2) felt that education is more important because care can be obtained at home. For the rest of the parents, nine felt that both are equally important whereas eight felt that care is more important due to their young age. A parent added that care is more important for now as the child is only an infant, but education will be more important once the child gets older. A husband-and-wife pair had opposing views. The wife felt that care is more important whereas the husband thought that both are equally important. Some of these views are illustrated in the following quotes:

Care and education; we cannot separate these two. In caring for the child, we are already educating the child and laying the foundation for better education ... Attachment, secure feeling and attention span; these come from care but they are also part of education (Supervisor 8).

Care is more important ... Education ... depending on their age ... They are still young, they need more care, need more food ... They must be healthy ... then we can educate them (Educarer 3).

Care [is more important] for his age now ... but when he gets out of infant care ... [we] will have to give more education (Parent 2).

Programing for learning and development

Only two supervisors, an educator and two parents referred to programing for learning and development as another dimension of quality care for infants/toddlers as depicted in the following quotes:

... develop their motor skills, language and cognitive skills ... [Include] ample space ... to create corners, play, move around (Supervisor 2).

... an infant needs to be taught ... scaffold ... Giving them that opportunity to explore ... will actually let them grow better (Educarer 2).

... let them play [and] ... don’t mind about getting dirty ... What I call experiential learning ... I prefer an environment like this where they can come out and play (Parent 4).

Educarers were asked to describe their views on whether infants/toddlers are too young to do things by themselves. Interestingly, three educarers thought that it depends on their age; one educarer thought that infants/toddlers are too young to learn things on their own; and eight educarers disagreed that infants/toddlers are too young to do things by themselves and gave some examples, as reflected in the following quote:

... packing up of toys ... makes them feel independent and also [provides] a sense of belonging by actually participating ... [Also] taking a diaper, opening up their cubby and taking their clothes, of course with guidance (Educarer 10).

When asked about how they thought children learn, all educarers described it as through play, observation, exposure to different things, repetition, imitation and their five senses. Educarers were asked to describe how they knew when a child has learnt something and to give an example from their experiences. An educarer shared the following anecdote:

The mother said that in the car, they turn on the nursery rhyme, ‘twinkle, twinkle little star’ and the child was doing this [the twinkling action] ... The mom knows it comes from the school, so she comes back and shares (Educarer 2).

Summary of beliefs and practices for quality infant/toddler care

All supervisors, educarers and parents expressed beliefs that quality in infant/toddler care comprised affective dimensions for infants/toddlers such as love, attention and safe, healthy and hygienic environments. However, only supervisors considered how these dimensions were important in promoting trust, security and comfort among infants/toddlers. When asked about their views on care and education dimensions in quality care, most supervisors, some educarers and a few parents said that they were both important. While a few supervisors, an educarer and a few parents believed that quality care was related to programing, none of them went on to explain why programing was important for infants/toddlers’ learning and development.

Beliefs about training for quality infant/toddler care

Supervisors and educarers were asked about their own training experience; what aspects of their training they found useful; and what particular areas they thought could be covered more comprehensively to prepare them for work with infants/toddlers. The two main themes which emerged were: (1) training for comprehensive knowledge and skills; and (2) training through practice.
Training for comprehensive knowledge and skills

There was a list of knowledge and skills that both supervisors and educators believed could be addressed more comprehensively in the training program (including the practicum).

Supervisors were asked to discuss their thoughts on how the Certificate/Diploma in Early Childhood Care and Education (CECCE/DECCE) or the Certificate in Infant/Toddler (CIT) training program has prepared the educators for working with infants/toddlers. While two supervisors thought that the program did prepare the educators, another two supervisors felt otherwise, as depicted in the following quote:

“They lack the routine care practice because it’s all theory … Even with a bachelor degree in early childhood, they can’t change a diaper … because all these are not taught in class … I attended the class before; there’s no demonstration at all, … we weren’t told how to do it, but we were asked to share and discuss it” (Supervisor 10).

Supervisors and educators were asked to discuss if they felt that the CIT training program was useful to their work. While some supervisors and educators thought that it was useful, others felt that only certain areas were useful such as routine care, planning activities, safety issues, developmental stages of the child and working with parents. Supervisors (n = 3) and educators (n = 5) pointed out the need for more information on observation skills and activities for infants/toddlers. Supervisors (n = 3) expressed their views and concerns about the program lacking sufficient hands-on experiences. While three educators felt that all areas that were covered in their training sessions were sufficient, three supervisors and three educators felt that certain areas of the training program not covered included aspects of interaction with parents and better parental partnership, as reflected in the following quotes:

… how to communicate with parents … because a lot of our teachers don’t know what to say to parents (Supervisor 5).

… communication with parents … because when I started the course … it didn’t cover much … I actually learnt from experiences, I learnt from mistakes that I made, what I was told by the parents (Educarer 6).

Training through practice

In terms of the length of the training program, seven supervisors and only two educators thought that the program needed to be more in-depth and lengthened by introducing more activities for the child; whereas four supervisors and almost all the educators felt that the program was either just right or too long. When the educators were asked about what they thought about the length of the practical components, three educators thought that the length was alright and four educators thought that it was too short. A supervisor and five educators had other thoughts and ideas with regards to the length and components in the practical training program, as illustrated in the following quotes:

… could lengthen the practical component. It’s a bit too short … [so] should be done in concurrent … Studying it and at the same time at the centre, you can visualise it better (Supervisor 3).

… a few hours for practical training is not enough … [it] should be longer … especially for those who are inexperienced (Educarer 8).

The length of training is not important but the content for training is important … When I am really on the job, I realised that a lot of things are not taught during the training and I need to find that out myself (Educarer 7).

Love for children, patience and passion for the job were attributes that most of the supervisors (n = 11) and educators (n = 12) thought that future trainees would need. Their advice for future trainees is presented in the following quote:

… they must have the passion … to teach children … Helping them in their character, in their behaviour … [and] helping them to see what is right and wrong … We mould their hearts (Supervisor 6).

Supervisors were asked to describe the things they did to support the work of the educators in their centre. While seven supervisors cited training as one of the many ways to support the educators, four supervisors supported their educators by having daily conversations, assuring them, conducting meetings and helping them out in little ways, like with paperwork. When asked to describe the sorts of ‘input’ or ‘review’ they provided for the infant/toddler program in the centre, some supervisors responded as illustrated in the following quotes:

We will meet up monthly … [to] give feedback for individual child’s needs … [and] look into the developmental checklist to see … where the child should be at and work towards those goals … In terms of materials … they will tell me what they need … to be replenished (Supervisor 3).

Every year end, we will send a survey to parents to give us their feedback and views for the year, … anything they are concerned about or they want us to improve … [and] will come up with it together with the teachers (Supervisor 2).

Summary of beliefs about training for quality infant/toddler care

Most supervisors and educators in the current study expressed views that practical experiences were important in training for infant/toddler care. Only a few of these supervisors were able to explain these practical experiences
in terms of learning processes which include understanding, thinking and reflecting. Educarers’ views about training were focused mainly on the provision of knowledge and skills and their application in the field. Only a few supervisors also mentioned the processes of own learning, the relationship between theory and practice and the significance of certain practices. Almost all the supervisors and educarers felt that childcare staff must also have the love, patience and passion to work with infants/toddlers.

**Parent–teacher partnership**

Parents were asked to describe the ways in which they support the educarers in the centre to provide quality care for their infants/toddlers. Some parents (n = 10) supported educarers by frequent communication of various forms ranging from face-to-face sessions and email. A few parents (n = 5) believed that being involved in school activities and cooperating with the educarer is a form of support for them. A parent felt that providing the educarer with freedom and the liberty to do what is best for her child is a way of supporting them. A few parents (n = 5) who were interviewed did not do anything in particular to support the educarers. When probed further, a parent cited communication and building a good relationship as exhibiting support for the educarer as reflected in the following quote:

*The teacher will actually give us feedback … my daughter knows this, she likes doing this … so we will try to reinforce things that she likes … We build a good relationship with the teacher because they are the people who have direct contact with my daughter* (Parent 16).

Parents made the following suggestions to improve the quality of infant/toddler programs at the centres: conduct a parent–teacher conference to discuss the development of their child; prepare a portfolio for their child; install a playground in the centre for the infants/toddlers; reduce the child-to-teacher ratio in the centre to ensure safety; and toilet-train their child earlier. A few parents (n = 8) were satisfied with the centre’s program and mentioned that they were satisfied with the centre in which their infants/toddlers were enrolled. When asked what parents looked out for when enrolling their child, two parents mentioned they wished for when they enrolled their infants/toddlers in centre-based programs. Many parents were generally satisfied with the care and education that their infants/toddlers received in the centre. While some provided suggestions on how the supervisors and educarers could further support them and communicate with them about their infant’s/toddler’s learning and development, only very few parents offered suggestions on how they themselves could contribute or support the supervisors and educarers in their work at the centre.

**Video review**

A video review was carried out in addition to the interview, to further reveal the educarers’ understanding of the nature of interactions and its contributions to infants’/toddlers’ learning and development.

Educarers were asked to describe their thoughts on the interaction between the caregiver and the toddlers in the video clip. They responded that the caregiver was responsive, spoke good English, communicated well, was skilful (selected a rhyme which matched the activity which the children were involved in) and spontaneous (used the rhyme to teach vocabulary), as reflected in the following quote:

*She uses very good English, not like some of us here … we use some “Singlish” here and there … When they were playing with the sand … she sang a song related to what they were using … and while singing the song, she also pointed out to the different parts of the teapot, the handle, the spout and stuff* (Educarer 5).

Educarers were asked to discuss how the interactions of the caregiver could affect the development of the toddlers in the video clip. All of the educarers thought that the interactions could have positive effects on the toddlers. One example is described in detail as follows:

*The teacher is communicating well … [and] is also scaffolding. Like when the child is playing with the teapot … there is an argument between the two children … [so] the teacher re-directed the other girl to another teapot … She added more fun in the learning … [by], instead of telling them that this is a teapot and the characteristics of a teapot, she did it through singing where it will actually attract more attention and interest of the child* (Educarer 2).

When the educarers were asked about what they considered to be good caregiving practices, most cited safety, hygiene, love, care, respect and praise, as depicted in the following quote:

*The teacher is … respecting the child … Instead of helping her to scoop, she lets her do it … [and] instead of scolding the two children, she respects their*
emotions as they are at the egocentric level where they will snatch, so she understands the child ... tells them nicely ... [and] educates the child through good manners ... reinforcing good habits, like each time a child shares, you must praise them (Educarer 2).

Three terms, ‘responsiveness’, ‘autonomy’ and ‘involvement’ were introduced to the educarers who were then asked to describe their understanding of those terms. Many educarers \((n = 8)\) misunderstood ‘responsiveness’ to mean ‘children responding to their names when being called or to a familiar sound’. Other educarers \((n = 4)\) understood the term as ‘responding quickly’, ‘giving a positive response to the child’ or ‘communicating/interacting with the child’ as illustrated in the following quote:

Responsiveness means you are responding to the child ... The child will feel that when I make a noise, I coo, I gurgle, I babble, I will get a response ... It’s a two-way thing; the child responds and you respond ... and that is the start of the social interaction (Educarer 11).

Some educarers \((n = 6)\) misunderstood ‘autonomy’ as ‘having to prepare ahead’ or ‘having enough materials for the activity’. Other educarers \((n = 6)\) understood the term as ‘allowing children to move freely to learn in any safe environment’, ‘giving children a chance to explore and learn’ or ‘letting children do things by themselves’, as illustrated in the follow quote:

Yes ... she allows the children to scoop ... and the other two children [are] free to roam, but I’m sure she keeps an eye on them as well ... Some autonomy for the children is very good; you need to give them a certain time until they need help, [or] you intervene (Educarer 11).

Many educarers \((n = 9)\) misunderstood ‘involvement’ as ‘educarers participating in the play activity’, ‘parents keeping educarers posted on their child’s progress’ or ‘children gathering for group activities’. Other educarers \((n = 3)\) understood the term as ‘giving children choices’ or ‘getting children involved in the activities’ as illustrated in the following quote:

The time when she sang the rhyme to the kids ... is when I think she is involved in the play with them ... Not stopping their play, introducing more interesting things to add to their play (Educarer 2).

Summary of video review

The educarers could easily identify the good practices in the video clip and describe the contributions of good practices to the infants’/toddlers’ learning and development. However, many educarers were not able to articulate the nature of the interactions between the caregiver and toddlers using the appropriate terms, ‘responsiveness’, ‘autonomy’ and ‘involvement’. Interestingly, of the three terms, they found ‘autonomy’ the easiest and ‘involvement’ the most difficult to explain.

Discussion

A summary of the key findings as well as the limitations and implications of the study are presented and discussed as follows.

Beliefs and practices for quality infant/toddler care

In this study, all the supervisors, educarers and parents shared the belief that affective dimensions were key determinants of quality care. Similar affective beliefs were also held by childcare staff in a number of previous studies (Brownlee et al., 2009). While the educarers enacted these affective dimensions in their practices, they did not explain why they were important or how these components affected the quality of infant/toddler care. However, some of the supervisors could explain why such dimensions were important but did not elaborate further.

When asked about their views on the care (affective) and education (cognitive) dimensions of quality infant/toddler care, most supervisors, half the educarers and some parents believed that both dimensions were equally important for infants/toddlers. However, they did not articulate the relationship between the care and education dimensions of quality care or why both dimensions were important to the holistic development of infants/toddlers. Additionally, only a few supervisors, an educarer and a few parents mentioned that programing was crucial for quality care and why it was important for infants/toddlers’ learning and development. During the observation of the educarers’ practices, only a few educarers were rated as supporting ‘involvement’ (as compared to ‘responsiveness’ and ‘autonomy’) for the infants/toddlers through engaging them in learning activities. Since educarers work directly and closely with the infants/toddlers and would have the greatest impact on the quality of care in the centre-based programs, it is important to understand and discuss their beliefs and practices in more detail.

Educarers did not view quality infant/toddler care as comprising both the care and education dimensions because they could have thought that parents expected them to meet the physical and emotional needs of infants/toddlers while they were at work. They did not focus on the provision of intellectual stimulation and learning for infants/toddlers as they could have also thought that education was for older children (Milgrom & Mietz, 2004). Nyland (2004) believes that this thinking could be due to the strong focus on attachment theory in training programs for infant/toddler care. Such a focus could project the image of the child as being vulnerable and helpless in the absence of his/her mother (Nyland, 2004). Press (2006) argues that while the child has the right to ‘provision and protection’, he/she must be viewed as a competent and active being/learner (p. 49).

Additionally, educarers’ emphasis on care dimensions of quality care could suggest less sophisticated
epistemological beliefs about knowing and knowledge (Entwistle, Skinner, Entwistle & Orr, 2000). Hence, in order to view quality as comprising care and education dimensions, educators’ beliefs need to be underpinned by more sophisticated epistemologies which view knowledge and practice as complex, tentative, evolving and evidence-based (Kuhn & Weinstock, 2002). Such a view is usually linked to the image of the childcare staff as a researcher (Moss, 2006) and involves a critique of multiple perspectives (Berthelsen et al., 2011; Brownlee et al., 2009).

Beliefs about training for quality infant/toddler care

Supervisors and educators did not differ much in the way they viewed the acquisition of knowledge and skills in training programs. They seem to view training as the transmission of knowledge and skills. Such a view about training could suggest less sophisticated epistemological beliefs about knowing and knowledge (Brownlee et al., 2009). Additionally, both the supervisors and educators indicated that practical experiences were important in training for infant/toddler care. This focus on the practical aspect of training by supervisors and educators is similar to what Misko (2001) found in a study of childcare workers’ perceptions of childcare training in Australia. The childcare workers in her study indicated that ‘practical experience was always or almost always the best part of the program’ (p. 26).

Hence, it is proposed that during the training in infant/toddler care, educators could be encouraged to view themselves as a researcher constructing a base of knowledge and practice through evidence-based learning and critical reflection. It is also proposed that educators be encouraged not to rely on their ‘maternal instincts’ and not to view themselves as a ‘substitute mother’ (Brownlee et al., 2009, p. 470).

Limitations of the study

Although this study is a good start and would provide insights into and make a contribution to early childhood education in Singapore, readers should be aware of the following limitations of the study.

This study cannot be generalised to every situation, as the sample was small (46 participants comprising 12 supervisors, 12 educators and 22 parents). However, measures were taken to ensure that all sampling decisions were made within the constraints of ethics and feasibility. Additionally, measures were also taken to ensure that researcher bias was kept to a minimum by constantly referring to the purpose of the study, literature, research questions and asking many questions throughout the study, as well as providing as much information as possible on the collection, analysis, interpretation and reporting of data.

Hence, the ‘burden of transferability’ is left to the reader of this study to determine the degree of similarity between the setting of this study and the setting of the intended study (Mertens, 1999, p. 183).

Implications of the study

This study supports the idea that epistemological beliefs and levels of childcare staff’s qualifications and training (professional and specialised) are related (Saracho & Spodek, 2007; Whitebook, 2003). Educators in this study demonstrated more objectivist beliefs as compared to supervisors who held more evaluativistic beliefs. Consequently, supervisors who had higher qualifications and training seem to hold more sophisticated epistemological beliefs.

Hence, it is suggested that training programs in infant/toddler care for childcare staff should focus on developing more evaluativistic beliefs (Brownlee & Berthelsen, 2006; Brownlee et al., 2009). It is also suggested that training programs could be designed to promote childcare staff as researchers or co-researchers with children, families and the community (Moss, 2006). However, it is suggested that childcare staff’s pre-existing beliefs about quality infant/toddler care should be investigated first.

Besides focusing on preparatory training alone, continuing training and professional consultations during practice should also be considered (Moss, 2000). There is some evidence that mentoring and coaching could have an impact on quality care (Campbell & Milbourne, 2005; Fiene, 2002; Kreader, Ferguson & Lawrence, 2005; Ramey & Ramey, 2006). There is also some evidence that issues related to the positive image and recognition of childcare staff within the community could have an impact on quality care (Ang, 2012; Goodfellow, 2000). Hence, it suggested that besides equipping childcare staff with the necessary knowledge and skills, training programs should also look into improving the image of the childcare staff as well as engaging them in the ‘wisdom of practice through reflection and self-evaluation’ (Brownlee et al., 2009, p. 471).

The results from this study (together with the EYDF introduced by the then MCYS in 2011) could be used to review the quality of care for infants/toddlers in centre-based programs as well as quality of training programs which prepare childcare staff for work with infants/toddlers.

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