

Diversity and inclusion in the early years

A. Petriwskyj*

School of Early Childhood, Queensland University of Technology, Brisbane, QLD, Australia

(Received 29 February 2008; final version received 24 August 2008)

The emphasis on inclusion of diverse learners presents challenges to early-years teachers, particularly those whose understandings have been framed by notions of school readiness and of special education for children with disabilities. This mixed-method study of children and teachers in early-years classes across three school sites in Australia explored factors associated with children's development, achievement and adjustment. The focus went beyond organisational or structural issues to consider pedagogic responses to diverse learners from the kindergarten class through Year 1 and Year 2. The study identified factors influencing teachers' responses to diversity, and highlighted areas of tension between inclusive policies, resourcing and normative understandings that have implications for teachers' professional learning.

Keywords: diversity; inclusion; early years

Introduction

Despite the current emphasis on inclusive education in school education and in early education and care (Corbett and Slee 2000; Mastropieri and Scruggs 2005), there remains confusion about the meaning of inclusion and its implications for teachers (Ainscow 2007). Definitions of inclusion have shifted in recent times from those focusing on readiness for assimilation into a general class (mainstreaming) and those focusing on integration or general class placement with English language instruction and accommodations for disability (Cook, Klein, and Tessier 2008), to those incorporating curricular and pedagogic differentiation to support children's sense of belonging (Gillies and Carrington 2004). Some discussions of inclusion still imply mainstreaming or integration, or incorporate segregation in special classes (Jones 2005) or partial withdrawal (Guralnick 2001). The emerging paradigm of inclusion involves all children having the right to participate actively in a general education setting and to be valued as members of that education community (Carrington 2007). Corbett and Slee (2000) distinguished between surface inclusion led by policy, second-level inclusion focused on changes to environments and curricula, and deep-level inclusion which restructures elements of the hidden curriculum of values and acceptance. This suggests a shift in philosophies of inclusion that encompasses more positive images of diverse children and goes beyond surface adjustments. Conceptualisations of inclusion in Australia now imply both social inclusion (belonging and being valued as a person) and academic inclusion (being supported to succeed in

*Email: a.petriwskyj@qut.edu.au

learning) and consider both the child and their family within their ecological context (Ashman and Elkins 2005).

The varying meanings of inclusion reflect the shift in thinking about diversity in children (Graham 2007). The focus on risk and deficit located the problem with the individual child (Terzi 2005). Critical evaluation of this focus has prompted a reconceptualisation that takes account of the contexts of learning and as a consequence a broader understanding of diversity that incorporates giftedness, gender, social background, learning variations and behavioural concerns as well as cultural and linguistic difference and disability has emerged (Ashman and Elkins 2005). Recent overarching constructs such as diverse abilities (Ashman and Elkins 2005) and diverse learners (Coyne, Kame'enui, and Carnine 2007) indicate acceptance of difference, while constructs such as diverse learning rights (Organisation for Economic Co-operation and Development (OECD) 2006) and learners in diverse classrooms (Dempsey and Arthur-Kelly 2007) reflect newer social models that recognise the role of social institutions in creating disabling circumstances (Gillies and Carrington 2004). Ng (2003) argued that broader diversity constructs reflect the complex and multi-dimensional nature of difference and more effectively addressed the power relations underlying inequality. These changes imply a move away from normative ideas that underpin categorisation of children and are connected with more differentiated pedagogies supporting learners with varied characteristics (Graham 2007). Debate continues over whether social constructions of diversity ignore real impairment (Abberley 1992) and whether there is adequate evidence that this shift supports children with significant difficulties (Forlin, Hattie, and Douglas 1996). It is unclear how teachers understand diversity and inclusion or act on emerging ideas.

The challenges teachers face in implementing inclusive policies have drawn attention to practical, attitudinal and policy issues that require resolution if deep level inclusion is to be a reality. Feasibility, including the maintenance of the integrity of the general classroom programme, appropriate equipment and personnel resourcing, access to specialist services, and minimisation of the stigma associated with difference, has been identified as a critical element in early childhood settings (Guralnick 2001). The keys to successful inclusion were identified by Horne and Timmons (2007) as teacher professional preparation, family and school support, and the provision of consultation time, but there are contextual differences. In early childhood centres, Mohay and Reid (2006) found that inclusion was limited by staff confidence about having the skills to offer a quality programme. However, in schools, Forlin, Hattie and Douglas (1996) found that negative attitudes influenced inclusion and Ainscow (2007) advocated for a review of school cultures underpinning change in practices. Wedell (2005) and Graham (2006) have noted that both normative understandings and assumptions about homogeneity mitigate against deep level inclusion and indicated the need for increased organisational and pedagogic flexibility. The literature focuses separately on early education in schools and before school, although links and overarching issues are beginning to be examined (Nutbrown and Clough 2006).

Recent emphasis on the role of inclusive early-years education in improving outcomes for diverse learners has focused on the quality of that education (OECD 2006), the learning environment (Freiberg 1999), the success of school transition (Pianta and Cox 1999), teacher responsiveness to diverse children (Jones 2005) and the connectedness of programmes to family backgrounds (Siraj-Blatchford 2006; Thorpe et al. 2004). However, the definition of quality in early-years programmes has

been contested. The traditional schooling focus on effective content delivery and the traditional early childhood focus on developmental play have both been challenged by child-responsive but educationally focused pedagogies located in socio-cultural understandings about learners and learning (Gipps and MacGilchrist 1999). The focus on children's readiness for school associated with assumptions of homogeneity within the class is still prevalent (Petriwskyj, Thorpe, and Tayler 2004), yet readiness constructs have been criticised as being inconsistent with inclusion (Corbett and Slee 2000). The emerging paradigm of transition, framed by ecological, critical and socio-cultural perspectives, considers the readiness of the school for the reality of variation in children, and identifies relationships with family and community as factors in quality early education (Dockett and Perry 2007). The agency of children as an influence on teacher practices is also increasingly taken into consideration (Dockett and Perry 2007; MacNaughton, Hughes, and Smith 2007).

In Australia, systemic reforms have been introduced in some states to support more effective early-years school education, as part of a wider reform movement aimed at improving educational outcomes (Queensland Government 2002). This process included the introduction in Queensland of play-based non-compulsory preparatory (kindergarten or reception) school classes as a structural or organisational means of enhancing outcomes through smoother transition into school as well as later entry to formal outcomes-based education (Queensland Studies Authority (QSA) 2003). Evaluation of the trial phase of this introduction indicated unhappiness in children from culturally diverse backgrounds and a limited teacher response to diversity (Thorpe et al. 2004). The school version of the British Index of Inclusion has also been introduced in Queensland to focus reform on catering more effectively for diverse learners in a climate of teacher resistance to inclusive policies, based in a history of specialised disability service provision (Gillies and Carrington 2004). The impact of these reforms on inclusive practices and children's outcomes in early-years settings in Australia is unknown. More in-depth investigation of the work of teachers in early-years classrooms may illuminate issues that require resolution for inclusion ideals to be realised.

This study focused on the following questions:

- How do early-years teachers respond to issues of concern for diverse learners?
- What structural and pedagogic responses do teachers use?
- How does child diversity influence teacher responses?

For this study, an inclusive definition of diverse learners is adopted to encompass children from culturally and linguistically diverse or socially marginalised backgrounds, children with diagnosed disabilities and/or gifts and children identified by teachers as having behavioural or learning concerns. The term 'kindergarten' is used for the non-compulsory class before compulsory Year 1, as this is a widely used term.

Method

Tensions remain not only in defining diversity and inclusion, but also about appropriate research methodologies for investigating teaching questions in early-years contexts (Ryan, Oschner, and Genishi 2001). Ryan et al. have advocated for methods of inquiry involving teachers themselves, to clarify the complexities of teaching, rather than relying on traditional process-product research. This mixed-method study

incorporated teacher explanations of their responses to offer insights into the issues influencing inclusive responses to diversity.

Participants

The study at three Australian government school sites involved 22 early-years teachers and 431 children in kindergarten, Year 1 and Year 2 classes at the end of 2004 and the commencement of 2005. The sites represented three different contexts: suburban, regional, and city multi-cultural. All children in the target classes were included, with the exception of two individuals for whom permission was denied. Child ages were from 4 to 7 years. Permission was provided by all school principals and all early-years teachers at the three sites agreed to participate. Four of the teachers were working in kindergarten classes, 10 in Year 1 classes, and eight in Year 2 classes, and all were qualified teachers with extensive early-years experience.

Measures

The key variables measured were as follows:

- (1) Teacher understandings of diversity and inclusion. Semi-structured interviews were conducted with 11 teachers in kindergarten and Year 1 to elicit their understandings of diversity and the ways in which they tried to respond to diversity in their classrooms. Interviews were audiotaped for transcription, although one teacher who declined interview agreed to submit written answers to the questions. Following specific questions about child diversity in their classroom, teachers were asked:
 - (a) What do you see as your responsibility in terms of varying the learning environment for diverse groups of children?
 - (b) What changes do you make to your teaching approach to cater for a wide range of children?
 - (c) How do you change your teaching across the day, the week, or the year based on your experience of children or your monitoring of their responses?
 - (d) What support systems in your school or community assist you in working effectively with diverse children? Are they available in the classroom, or on a pull-out basis?
- (2) Child learning and adjustment: standard child assessments measured literacy, numeracy, physical and oral language development in kindergarten and Year 1 ($n = 209$) and classroom engagement in kindergarten, Year 1 and Year 2 ($n = 413$) repeating measures from the Preparing for School evaluation (Thorpe et al. 2004). These child assessments were administered by the usual classroom teachers to avoid the negative influence of external testing on young children. Teachers were working within a limited time frame without additional training in data collection, which restricted the measures to those that were brief and easy to administer, with unambiguous directions and prepared assessment forms:
 - (a) Early and emergent literacy: a measure of concepts about print, reading and writing developed by O’Gorman et al. (2003). This measure has a standard storybook in the style of an early reader, in which the text is used as a focus for the identification of concepts about print and reading. It also

provides the stimulus material for the writing task in which children are asked to write about themselves. Reading is scored according to number of words correctly read, concepts of print according to identification and naming of letters and words, and writing according to conveying of meaning, number of ideas expressed, complexity of usage and concepts of print at four levels of emergent literacy behaviours.

- (b) General mathematics understanding: a 14-item measure adapted from the Griffin and Case (1997) Number Knowledge Test measures both number and broader mathematical understandings. The early number individual assessment measures counting, number sense, cardinal number, conservation and addition of small numbers. It was supplemented with items from other strands of mathematical knowledge (space, volume, size and shape). Children whose scores were high were offered three supplementary items covering areas (two-digit numbers, concrete addition and subtraction) identified as difficult during the evaluation study (Thorpe et al. 2004).
 - (c) Classroom engagement: a 23-item checklist adapted from Settling into School, which was derived from the Teacher Rating Scale of School Adjustment (Birch and Ladd 1997) with additional items from the Strengths and Difficulties Questionnaire (Goodman 1997). The classroom engagement measure is a rating scale of children's social adjustment and behaviour in the school setting, which is scored by classroom teachers on a three-point scale. It is constructed around four subscales: cooperative participation, independence, social participation and hyperactivity.
 - (d) Communication and physical development: an 18-item measure of vocabulary and language complexity was developed from an upward extension of the MacArthur Communicative Development Inventory (Fenson et al. 1991). In addition, six physical development items used teacher rating of fine and gross motor development and fitness.
- (3) Pedagogical practice: non-participant observations were made in 22 classrooms using the standard protocol US Assessment of Practices in Early Elementary Classrooms (APEEC) (Hemmeter et al. 2001), which has three subscales: physical environment, instructional context and social context. Because there were gaps in this measure for Australian kindergarten conditions, gross motor and diversity subscales from the associated US Early Childhood Environment Rating Scale (ECERS) Revised (Harms, Clifford, and Cryer 1998) and the British ECERS Extension (Sylva, Siraj-Blatchford, and Taggart 2003) were added. These scales provide observational descriptors scaled from one (poor) to seven (excellent), with a score of three representing minimal quality. There were two APEEC diversity items and three ECERS diversity subscale items related to participation of children with disabilities, socio-cultural diversity, individualised planning, gender equity and racial equity. These scales were selected because of their clarity of scoring, the range of items covered, their inclusion of diversity items and their combined ability to provide evidence in both outcomes-based and play-based classes. Although their basis in developmentally appropriate practice was problematic in a diversity study, there are few alternate tools relevant across early-years settings.

Classroom observation and teachers interviews were conducted by a single researcher, with observations occurring at more than one time across the school day. Teachers

were asked to identify children in diversity groups, using both school data and their own information about their class, and data were coded to assure privacy.

Analysis

Content analysis of teacher interviews derived themes from the patterns of response to offer insights into teachers' understandings of diversity and their strategies for catering to the range of children in their classrooms. Learning environment observational notes were used to supplement interview data. Quantitative analyses were undertaken using scores derived from standard observation protocols and standard child assessments in early numeracy, literacy, classroom engagement, physical ability and language ability. The analyses addressed two key questions: What are the effects of different levels of pedagogic practice on children's attainment? How do children in diverse groups respond to different levels of pedagogic practice? To this end tests of associations among variables were explored using Pearson correlations and tests of difference between diverse groups and others were employed. Non-parametric tests of difference, Kruskal–Wallis and Mann–Whitney, were used because distributions did not approximate normality. Diversity was defined in two ways. Firstly difference of ability was defined by using quartile groups to permit comparison between the majority of the class (quartiles 2 and 3) and the upper and lower outcomes groups. This approach is consistent with interview data that suggested teachers referenced difference normatively (for example, against an average child). Secondly, teacher-defined categories of cultural and social difference, learning and behavioural concerns and diagnosed disability were used.

Results

Diversity in classrooms

Proportions of children identified by teachers as diverse learners varied from 12% to 100% per class, offering distinctly different environments for teaching. Table 1 shows the pattern of diversity across the sites when official school data were used. The difference between the non-English-speaking background (NESB) and English as a second language (ESL) categories relates to use of ESL for support service eligibility.

The key diversity areas nominated by teachers were disability, learning difficulty and linguistic difference. No children with gifts were identified, 6.5% of children were identified as having a diagnosed disability and three major cultural and linguistic subgroups (Maori/Pacific 3.3%, Vietnamese 2.6% and Indigenous 5.9%) were identified. Some teacher identification figures were much lower than anticipated, given the official school data and state statistics. For example, teachers identified 2.0% as having English as a second language (compared with official figures of up to 14% in Year 2) and only 0.7% as being of low socio-economic status background.

Question 1: Teacher responses to diversity

Teachers reported both structural and pedagogic adjustments to cater for diversity, but more commonly reported and were observed to use structural responses.

Table 1. Class diversity by official category and year level (*n* = 22 classes).

Diversity	Kindergarten (<i>n</i> = 4)	Year 1 (<i>n</i> = 10)	Year 2 (<i>n</i> = 8)
Non-English-speaking background	1.75 (SD = 3.5), 8.5%	4.70 (SD = 5.58), 21%	2.17 (SD = 3.49), 8.7%
Diagnosed disability	0.75 (SD = 0.5), 3.7%	1.00 (SD = 2.23), 4.6%	1.66 (SD = 2.16), 6.6%
English as a second language	1.50 (SD = 3.38), 7.3%	3.10 (SD = 3.98), 14.2%	0.33 (SD = 0.51), 1.3%
Indigenous	1.25 (SD = 0.96), 6.1%	1.70 (SD = 2.0), 7.8%	1.33 (SD = 1.30), 5.3%
Other concerns (literacy and behaviour)	2.50 (SD = 0.58), 12.2%	2.80 (SD = 3.08), 12.8%	4.00 (SD = 2.0), 16%

Structural responses

Grouping and retention. Structural or organisational changes were made, particularly for diagnosed disability and literacy concerns. Class streaming was evident at a site characterised by high levels of diversity, with children with English as a second language grouped in one class, and children with disabilities in another. The most common strategy in Years 1 and 2 across all schools was ability grouping, but neither streaming nor ability grouping was used in kindergarten. One-third of the teachers nominated grade retention as an appropriate response to children's developmental immaturity and 2.4% of children were actually retained in grade. Multi-age classes were identified by two teachers as being a practical response to diversity:

I've got 3 different levels of the reading groups, and try to give them work where they're at so they feel they're achieving.

We have had a couple of children in the last couple of years who we have actually got to repeat (kindergarten). They've come to Grade 1 and we've asked them to repeat (kindergarten) because we've said to the parents they're socially and emotionally not ready. We can't really do anything much with them and they'll end up repeating Grade 1.

Access to support services. All teachers commented positively on the impact in-class teaching assistance made on outcomes but some identified limitations on consultation time and access to specialist support as a concern. Special education teachers and aides, Reading Recovery teachers, Indigenous and Vietnamese aides, occupational and language therapists, guidance officers (psychologists) and teachers of ESL were accessed, but their availability was limited to children with diagnosed disabilities, children with little or no English or Indigenous children (literacy only). While kindergartens did not have formal specialist staff access during the study period, they had more general teacher aide access than Years 1 or 2 classes. Volunteers were used to offer individual learning support, and one teaching team offered volunteer training:

I campaign really hard for them. I get down to that special needs committee and I start lobbying. I get whatever I can for that child.

We have access to a speech pathologist but we only have a small access in that she has very little time – only a day for the whole school.

We've made sure we have quite a bank of volunteers that come in. My teaching partner, runs a volunteer programme the school has set up and that's done at the beginning of the year and shows them how to deal with different children, different learning needs.

Utilisation of support services. The strategies for utilising support services varied, depending not only on teacher preferences and child issues, but also on the leadership of school principals and heads of special education within the schools. Both part-time segregation in special education classes or English language classes and in-class segregation with a specialist aide were used by four of the teachers, but over half the teachers used in-class support with small groups of children or the whole class:

The guidance officer assisted in locating the student 2 days in the SEDU (special education development unit) near our school.

The OT (occupational therapist), she also will do home programmes for parents, and there is an aide who will work with the OT children before school for a time, 15 minutes or whatever. She will come up and do their exercises with the whole class.

Also I have the special ed teacher first session every day except Friday. She is going to withdraw the ascertained (diagnosed) children. I like them to work with all the children not just the ascertained children.

Pedagogic responses

Changes to curriculum and strategy. Interview and observational data indicated that teachers in kindergarten and Year 1 made a number of adjustments to curriculum and strategy to cater more effectively for the range of children, but there was less evidence of such adjustments in Year 2. Teachers in kindergarten and Year 1 reported changes in task, variations in teaching resources or levels of difficulty, alterations to instructional pacing and assessment modifications. Most teachers indicated that they made provision for varying learning styles. In three highly diverse kindergarten and Year 1 classes, the teachers reported incorporating culturally appropriate resources and learning experiences, additional language experiences and health care to cater more effectively for children:

Varied learning styles. ... We've done a lot of Seven Ways and incorporated that into the lessons – multiple intelligences.

We have a variety of learning experiences going on. We make sure that children are not all sitting in rows in their desks all doing exactly that same thing, because if you do you are probably not meeting the needs of approximately 80% of your class.

First ... change your expectation ... then depending on the child, you change the pace at which you teach. The type of activity ... you change the type of activity. You can't expect them all to come of the sausage machine exactly the same.

Classroom environment quality (APEEC and ECERS). The quality of the classroom learning environments were sound (scores of 4 or above on the APEEC and ECERS) but scores reduced markedly from kindergarten to Year 2 (Figure 1). Teachers reported that differences in human and material resource provision influenced their capacity to offer optimal environments for diverse learners.

Links between kindergarten and subsequent classes were found in room accessibility (physical environment, PE), monitoring of child progress, warm teacher-child language and subject integration (instructional context, IC), teaching of social skills and participation of children with disabilities (social context, SC). Contrasts were found in resources including gross motor space and equipment (GM), and in items emphasising individual differentiation rather than class conformity (flexibility in transition between activities, display of individualised child products, child decision-making, individualised planning). Teachers in Years 1 and 2 were critical of the level of resource provision and they reported personally supplementing limited materials or borrowing materials from kindergarten to cater for the range of children. This may have inflated their instructional context (range of materials) scores. Kindergarten teachers noted that they had less support service access than Years 1 and 2 teachers, but that the flexible environment facilitated responsiveness to diversity:

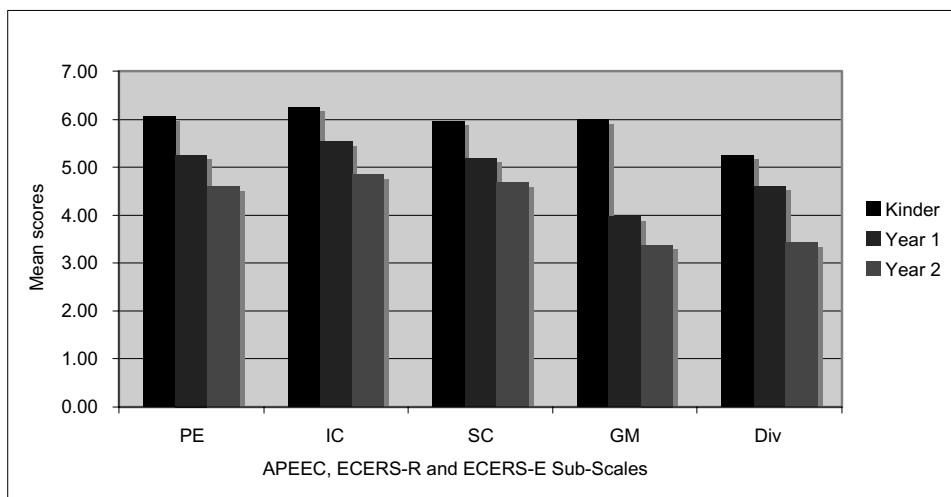


Figure 1. Subscale means by class type.

A (kindergarten) environment is just lovely to have these children in because you're teaching to their individual needs. It's very different to a year 1 classroom, where you have a very more structured curriculum.

Statistically significant associations were found between learning environment scores and outcomes of children in kindergarten and Year 1, although most were modest (Table 2). When Year 2 classes were included, a modest negative relationship between hyperactivity and learning environment was also found but Year 2 classroom engagement scores should be interpreted with caution as two (out of eight) teachers reported delaying adjustment assessment until children had settled into Year 2.

Diversity environment (APEEC and ECERS). Differences in catering for diversity were identified in the ECERS-E diversity subscale and APEEC diversity items (Table 3). In kindergarten classes, mean scores for individualised planning and participation of children with disabilities were uniformly high while in Year 1 and Year 2 mean scores for participation of children with disabilities were sound, but means for gender and racial equity in Year 2 were near minimal levels, indicating that teachers' practices were less adaptive to gender and racial diversity. Teachers in Years 1 and 2 explained that outcomes pressures including statutory national assessment impacted on their capacity for differentiation. When individual planning (diversity environment) quartiles were compared, significant differences were found in children's classroom engagement: $H = 17.124$ (degrees of freedom (d.f.)-3, $n = 431$), $p < 0.025$; literacy, $H = 53.162$ (d.f.3, $n = 208$), $p < 0.005$; general mathematics, $H = 37.239$; and supplementary mathematics, $H = 20.095$ (d.f.3, $n = 223$), $p < 0.005$.

Many teachers commented that the limited access they had to appropriate professional in-service learning about diversity impacted on their confidence in addressing complex diversity issues. Professional development was provided only when they made a special request or experienced a crisis situation. Only two teachers reported pre-service professional learning directed at diversity issues and practices, although a third teacher had undertaken further formal study in the area. All teachers reported

Table 2. Correlation of outcomes and learning environment scores.

Child outcomes	Learning environment				Diversity
	Physical	Instruction	Social	Gross motor	
Reading					+0.251** (K)
Supplementary mathematics	+0.496* (K)	+0.405* (K)	+0.496* (K), +0.187** (Year 1)	+0.504* (K)	+0.275** (K), +0.181** (Year 1)
Hyperactivity	-0.187* (K-1)	-0.196* (K-1)	-0.172** (K-1)	-0.200* (K-1)	
Manipulative skills				+0.253** (K), -0.210* (Year 1)	
Gross motor skills				+0.304* (K), +0.326* (Year 1)	

Table 3. Diversity item mean scores by class type.

Diversity item	Kindergarten	Year 1	Year 2
Early Childhood Environment Rating Scale (ECERS) Extension individual planning	6.25 (SD = 0.50)	4.80 (SD = 1.14)	4.00 (SD = 1.31)
ECERS gender equity	4.50 (SD = 1.00)	4.10 (SD = 1.10)	2.88 (SD = 0.64)
ECERS racial equity	5.00 (SD = 0.82)	4.90 (SD = 1.20)	3.38 (SD = 0.52)
Assessment of Practices in Early Elementary Classrooms (APEEC) disability participation	6.50 (SD = 0.58)	5.60 (SD = 0.57)	5.50 (SD = 0.93)
APEEC diversity (social cultural)	4.75 (SD = 1.50)	4.10 (SD = 0.57)	4.00 (SD = 0.00)

positively on the value of on-site advice from special education teachers, English as Second Language teachers, therapists or cultural assistants:

All of the in-service just happens. It's all reactive. So you find yourself in heap before you get the in-service.

We have a Vietnamese aide and an Aboriginal aide. Its lovely because culturally you can come on staff and not be aware of things that are offensive and aren't appropriate. Its been really good and I've learnt a lot.

Collaborative relationships

Whilst teachers indicated that support relationships with specialist staff within the school were particularly helpful, they also nominated school leadership, consistent behaviour policies and cooperative teamwork as factors in their ability to respond effectively. One teacher discussed contact with external community agencies. While respect for families was observed, the APEEC family involvement item showed marked variation (minimal score of three through to excellent score of six) and reduction in mean scores from year to year. Two teachers explained that classroom involvement of families was restricted because some groups (for example, Maori/Pacific) valued community sharing of responsibility for children and this resulted in loss of confidentiality of classroom information. Parent-teacher contact was reported to be in the form of volunteer assistance to teachers (e.g. work in classrooms), receipt of teacher advice (e.g. information meetings) and brief informal contact. More extensive parent-teacher conversations about children were observed in kindergartens.

Question 2: Impact of diversity in classes on teaching

In addition to the impact of teacher provisions on children, a reciprocal influence of classroom diversity on teachers was identified. Diversity environment scores were highest and more diversity-appropriate changes were reported in classrooms with very high levels of diversity.

Numbers of diverse learners

When diverse learners were considered as a broad group, significant positive associations were found between total numbers of diverse learners per class and class gross

Table 4. Correlation of numbers in subgroups and academic outcomes.

	Total literacy	Supplementary mathematics	Total mathematics
South East Asian	+0.248*	+0.155**	
Maori/Pacific		-0.177*	
English as a second language (ESL)		-0.274*	
Low socio-economic status (SES)	-0.170**		-0.170**
Disability			-0.176**

motor environment, $r = +0.295$; physical environment, $r = +0.236$; diversity environment, $r = +0.209$, $p < 0.05$; and social context, $r = +0.141$, $p < 0.01$. Across all sites there was a positive association between the numbers of South East Asian children and the diversity environment provided $r = +0.139$, $p < 0.05$, between the numbers of Maori/Pacific children and the gross motor environment, $r = +0.142$, $p < 0.05$, between numbers of children from low socio-economic status backgrounds and both diversity environment, $r = +0.154$, $p < 0.05$, and social context, $r = +0.168$, $p < 0.05$, and a negative correlation between numbers of children with behavioural concerns and gross motor environment, $r = -0.148$, $p < 0.05$. Unexpectedly, associations with instructional context were not significant suggesting instruction approach remained more stable.

Negative associations were found between total numbers of diverse learners per class and outcomes related to self-expression (oral communication, $r = -0.328$; social skills, $r = -0.262$; writing, $r = -0.204$, $p < 0.05$). Expected relationships were found between the numbers of children in diversity subgroups and academic outcomes (Table 4). However, there was no significant association between academic outcomes and the presence of high classroom numbers of Indigenous children or children with 'other concerns' (behaviour and literacy). This was an unexpected result, but children in both these groups received literacy support services.

Discussion

Across the early-years classes, teacher appeared to construct diversity as disability, learning difficulty or lack of English, rather than the broader notions of diverse learners (Coyne, Kame'enui, and Carnine 2007) or learners in diverse classrooms (Dempsey and Arthur-Kelly 2005). There was limited evidence of diversity conceptualisation encompassing issues such as social and cultural background or giftedness, for which pedagogic responses rather than service provision are indicated. Observations and teacher reports suggested a persistence of normative referencing of children by teachers (e.g. focus on readiness and retention) and an emphasis on deficit categorisation. Teachers' discursive positioning was consistent with their responses to diversity that focused on issues that attract funding and additional human resource provision (e.g. learning support), although these responses could also be interpreted as a pragmatic effort to address feasibility concerns raised by Guralnick (2001). Such positioning is likely to be perpetuated by the restriction of support services to formally diagnosed groups (Graham 2006). This suggests not only that teacher professional learning needs to focus on both disability and broader issues such as giftedness and cultural diversity, but also that systemic change is needed.

Teacher interviews offered insights into both their understandings of issues and the pragmatic classroom concerns that impact on their inclusion practices. The focus on internal support service access and the use of partial segregation in Years 1 and 2 suggest that teachers may still be developing strategies to utilise specialised services in more inclusive ways in the context of limited professional learning, supporting Mohay and Reid's (2006) finding that teachers lacked confidence in their skills. Utilisation strategies appeared to be framed by personal pedagogies, specialist staff advice and school policy, but the level of teacher empowerment in these decisions was unclear. The introduction of the school-level Index of Inclusion was intended to reduce the focus on individual child deficits (Gillies and Carrington 2004), so aspects of the early-years version (Booth, Ainscow, and Kingston 2006) might be effective in assisting kindergarten and other early-years teachers to reconsider their responses and understandings. However, teachers highlighted systemic issues that need to be addressed in the context of very complex class groups. These include the inadequacy of support resources, limited availability of professional learning and external outcomes pressures including statutory assessment.

Although there was an emphasis on structural responses similar to those identified by Horne and Timmons (2007) in Canada (e.g. consultation time and school supports), all teachers incorporated some curricular and pedagogic changes. These changes considered content, process and output, as Tomlinson (2005) recommended, but the systemic issues teachers in Years 1 and 2 identified above were nominated as barriers to more differentiated classroom practices. The Early Years Curriculum for kindergartens was intended to influence practices across the early years (QSA 2003) and has the potential to increase pedagogic flexibility (Graham 2006), but its impact appeared modest. Models of in-service professional learning based on critical reflection, such as the action learning circles model proposed by MacNaughton, Hughes and Smith (2007) may be relevant since they would assist in reframing practices in response to issues teachers identify in their own context. Pre-service education initiatives designed to prepare teachers more adequately for the realities of diversity in classrooms (Horn and Timmons 2007) may need to consider both strategies for differentiation and critical thinking about effective contexts for early education.

Both interviews and learning environment scores indicated an overall commitment to educational quality including diversity provisions and some supportive links between kindergarten and subsequent classes, but declining scores associated with increasing year levels could suggest reductions in quality of response to diversity as children moved through the early years. The low diversity environment scores and low scores on other individual differentiation items in Year 2 support this argument. This could affect successful transition into school, impacting on the ongoing progress of some children (Dockett and Perry 2007). Another interpretation could be that the APEEC and ECERS measures were framed around developmentally appropriate practice constructs that may not necessarily be seen as relevant by the time children are in Year 2. Lower scores in Year 2, therefore, might not imply poor quality, as changes may be appropriate as children move towards the transition from early years into the middle school. The impact of learning environment quality on outcomes offered some support to Freiberg's (1999) argument that schools need to establish supportive environments as protective factors in the lives of children facing varied challenges. Use of the academic subscales of the ECERS-E and -R would have indicated curricular quality as another important influencing factor in kindergartens, but the content would require modification for Australian contexts and a similar measure for later early-years

classes was not identified. The study highlighted the need for a single early-years learning environment measure applicable to both play-based and outcomes-based contexts that accounts for varied diversity issues.

Some changes teachers made to the learning environment were associated with pressures from high numbers of diverse learners. This may demonstrate teachers' self-evaluation of their teaching or may indicate an influence of child agency in framing teacher responses as indicated by MacNaughton, Hughes and Smith (2007). The low saliency of cultural concerns in less diverse classrooms suggests that teachers prioritise issues, or that inclusion focuses more on disability in those schools. This is important in the light of Australian evidence linking academic learning and children's lifeworlds in Indigenous children (Frigo and Adams 2002) and children from socially diverse backgrounds (Comber and Kamler 2004). More extensive family and community involvement might have supported deeper understandings of children and development of more effective and culturally relevant teaching interactions as argued by Siraj-Blatchford (2006) and Dockett and Perry (2007). The recent emphasis in inclusive early education on family empowerment (Guralnick 2001) represents a different construction of family-school relationships from those that teachers considered appropriate in their settings. Negotiation of power relationships and collaborative resolution of differences in cultural understanding of confidentiality required further consideration. Teachers identified the positive role of cultural teaching assistants in guiding their understandings, which suggests they might be a valuable link between schools, families and communities.

Limitations

While the small number of investigation sites influenced the broader application of the study, it offered opportunities to collect in-depth data that facilitated analysis of the complexities of diversity issues. Data skewing suggested the likelihood of a ceiling effect in the mathematics, physical development and oral communication measures. Had parents been included in the study and asked to nominate their child's diversity characteristics, contrasting evidence may have pointed to additional matters to be addressed if inclusive policies are to be fully realised. Indeed, obtaining evidence about diverse learning from parents, children and other staff would enable deeper consideration of inclusion in practice.

Conclusions

Evidence presented in this study revealed understandings of diversity that appeared to be framed by support service categories and the history of specialised service provision for children with diagnosed disabilities. These understandings illustrate the challenges that exist when diversity models are reconceptualised and policy is changed to reflect contemporary research. Application to classroom practice takes time. Teachers need access to professional learning relevant to common concerns and contemporary approaches in complex early-years classrooms. The limited access to pre- and in-service professional learning programmes reported by early-years teachers indicates a potential avenue for future development in response to diversity.

Access to support services, the availability of teaching resources and outcomes pressures as well as limited professional learning about diversity influenced efforts by early-years teachers to modify the learning environment and respond more effectively

to the learning rights of diverse learners. Addressing structural issues, systemic pressures and policy frameworks that inhibit responsive practice cannot be underestimated. However, evidence of the impact of differentiation of pedagogical practice for diverse learners highlights pedagogic change as a key priority for effective responses to diversity. The challenge of different cultural perspectives was highlighted with respect to family involvement, and further investigation of effective relationships with families of young children is needed.

Acknowledgements

Professor C. Tayler, University of Melbourne, and Professor K. Thorpe, Queensland University of Technology, are both thanked for their help with this paper.

Notes on contributor

A. Petriwskyj is a lecturer in inclusive early education and care at the School of Early Childhood, Queensland University of Technology, Brisbane, Australia

References

- Abberley, P. 1992. The concept of oppression and the development of a social theory of disability. In *Policies for diversity in education*, ed. T. Booth, W. Swan, M. Masterton, and P. Potts, 231–40. London: Routledge.
- Ainscow, M. 2007. Taking an inclusive turn. *Journal of Research in Special Educational Needs* 7, no. 1: 3–7.
- Ashman, A., and J. Elkins. 2005. *Educating children with diverse abilities*. 2nd ed. Frenchs Forest: Pearson.
- Birch, S., and G. Ladd. 1997. The teacher–child relationship and children’s early school adjustment. *Journal of School Psychology* 35: 61–79.
- Booth, T., M. Ainscow, and D.M. Kingston. 2006. *Index for inclusion: Developing learning, participation and play in early years and child care*. Bristol: Centre for Studies in Inclusive Education.
- Carrington, S. 2007. Classroom relationships, pedagogy and practice in the inclusive classroom. In *Schools and diversity*. 2nd ed., ed. M. Keefe and S. Carrington, 108–27. Frenchs Forest: Pearson.
- Comber, B., and B. Kamler. 2004. Getting out of deficit: Pedagogies of reconnection. *Teaching Education* 15, no. 3: 293–310.
- Cook, R., M.D. Klein, and A. Tessier. 2008. *Adapting early childhood curricula for children with special needs*. 7th ed. Upper Saddle River, NJ: Pearson.
- Corbett, J., and R. Slee. 2000. An international conversation on inclusive education. In *Inclusive education: Policy, contexts and comparative perspectives*, ed. F. Armstrong, D. Armstrong, and L. Barton, 133–46. London: David Fulton.
- Coyne, M., D. Kame’enui, and D. Carnine. 2007. *Effective teaching strategies that accommodate diverse learners*. Upper Saddle River, NJ: Pearson.
- Dempsey, I., and M. Arthur-Kelly. 2008. *Maximizing learning outcomes in diverse classrooms*. South Melbourne: Thomson.
- Dockett, S., and B. Perry. 2007. *Transitions to school: Perceptions, expectations and experience*. Sydney: UNSW Press.
- Fenson, L., P. Dale, S. Reznick, D. Thal, E. Bates, J. Hartung, S. Pethick, and J. Reilly. 1991. *Technical manual for the MacArthur Communicative Development Inventory*. San Diego, CA: San Diego State University.
- Forlin, C., J. Hattie, and G. Douglas. 1996. Inclusion: Is it stressful for teachers? *Journal of Intellectual and Developmental Disability* 21, no. 3: 199–217.
- Freiberg, J. 1999. *School climate: Measuring, improving and sustaining healthy learning environments*. London: Falmer.

- Frigo, T., and I. Adams. 2002. Diversity and learning in the early years of school. Paper presented at the AARE Conference, December 2002, in Brisbane, Australia.
- Gillies, R., and S. Carrington. 2004. Inclusion: Culture, policy and practice. A Queensland perspective. *Asia-Pacific Journal of Education* 24, no. 2: 117–28.
- Gipps, C., and B. MacGilchrist. 1999. Primary school learners. In *Understanding pedagogy and its impact on learning*, ed. P. Mortimore, 46–65. London: Sage.
- Goodman, R. 1997. The strengths and difficulties questionnaire: A research note. *Journal of Child Psychology and Psychiatry and Allied Disciplines* 38: 581–6.
- Graham, L. 2006. Caught in the net: A Foucaultian interrogation of the incidental effects of limited notions of inclusion. *International Journal of Inclusive Education* 10, no. 1: 3–25.
- Graham, L. 2007. Done in by discourse ... or the problem/s with labelling. In *Schools and diversity*. 2nd ed., ed. M. Keefe and S. Carrington, 46–53. Frenchs Forest: Pearson.
- Griffin, S., and R. Case. 1997. Re-thinking the primary school math curriculum: An approach based on cognitive science. *Issues in Education* 3, no. 1: 1–49.
- Guralnick, M. 2001. *Early childhood inclusion: Focus on change*. Baltimore, MD: Paul H. Brookes.
- Harms, T., R. Clifford, and D. Cryer. 1998. *Early childhood environment rating scale; revised edition ECERS-R*. New York, NY: Teachers College Press.
- Hemmeter, M., K. Maxwell, M. Ault, and J. Schuster. 2001. *Assessment of practices in early elementary classrooms APEEC*. New York, NY: Teachers College Press.
- Horne, P., and V. Timmons. 2007. Making it work: Teachers' perspectives on inclusion. *International Journal of Inclusive Education* 1: 1–14.
- Jones, P. 2005. *Inclusion in the early years: Stories of good practice*. London: David Fulton.
- MacNaughton, G., P. Hughes, and K. Smith. 2007. Rethinking approaches to working with children who challenge: Action learning for emancipatory practice. *International Journal of Early Childhood* 39: 39–57.
- Mastropieri, M., and T. Scruggs. 2005. *The inclusive classroom: Strategies for effective instruction*. Upper Saddle River, NJ: Pearson.
- Mohay, H., and E. Reid. 2006. The inclusion of children with a disability in childcare: The influence of experience, training and attitudes of childcare staff. *Australian Journal of Early Childhood* 31, no. 1: 35–42.
- Ng, R. 2003. Towards an integrative approach to equity in education. In *Pedagogies of difference: Rethinking education for social change*, ed. P. Trifonas, 206–19. New York, NY: Routledge Falmer.
- Nutbrown, C., and P. Clough. 2006. *Inclusion in the early years: Critical analyses and enabling narratives*. Thousand Oaks, CA: Sage.
- O'Gorman, L., B. Broughton, S. Lennox, and K. Thorpe. 2003. Early and emergent reading assessment. Unpublished manuscript.
- Organisation for Economic Co-operation and Development (OECD). 2006. *Starting strong II. Early childhood education and care*. Paris: OECD.
- Petriwskyj, A., K. Thorpe, and C. Tayler. 2005. Trends in construction of transition to school in three Western regions – 1990 to 2004. *International Journal of Early Years Education* 13, no. 1: 55–69.
- Pianta, R., and M. Cox. 1999. *The transition to kindergarten*. Chapel Hill, NC: Paul H. Brookes.
- Queensland Government. 2002. *Education and training reforms for the future*. Brisbane: Queensland Government.
- Queensland Studies Authority (QSA). 2003. Introducing the draft early years curriculum. Paper presented at the University of Southern Queensland, September 2003, in Toowoomba, QLD, Australia.
- Ryan, S., M. Oschner, and C. Genishi. 2001. Miss Nelson is missing! Teacher sightings in research on teaching. In *Embracing identities in early childhood education: Diversity and possibilities*, ed. S. Grieshaber and G. Cannella, 45–59. New York: Teachers College Press.
- Siraj-Blatchford, I. 2006. Diversity, inclusion and learning in the early years. In *Contemporary issues in early years education*, ed. G. Pugh and B. Duffy, 107–18. London: Sage.
- Sylva, K., I. Siraj-Blatchford, and B. Taggart. 2003. *Assessing quality in the early years: Early childhood environment rating scale extension ECERS-E*. Stoke-on-Trent: Trentham.

- Terzi, L. 2005. Beyond the dilemma of difference: The capability approach to disability and special educational needs. *Journal of Philosophy of Education* 39, no. 3: 443–59.
- Thorpe, K., C. Tayler, R. Bridgstock, S. Grieshaber, P. Skoien, S. Danby, and A. Petriwskyj. 2004. *Preparing for school: Report of the Queensland Preparing for school trials 2003/2004*. Brisbane: Queensland University of Technology.
- Tomlinson, C. 2005. *How to differentiate instruction in mixed-ability classrooms*. 2nd ed. Upper Saddle River, NJ: Pearson.
- Wedell, K. 2005. Dilemmas in the quest for inclusion. *British Journal of Special Education* 32, no. 1: 3–11.

Copyright of International Journal of Inclusive Education is the property of Routledge and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.