

Chapter 14

A framework for conceptualising early childhood education

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Introduction

Vygotsky argued that children are cultural beings, living in particular communities at particular times and living and constructing a particular history. Research framed from a socio-cultural perspective is less about revealing 'the eternal child' and more about uncovering 'the historical child' (Vygotsky, 1987). Socio-cultural perspectives take into account the social, historical and cultural dimensions of everyday activities and seek to better understand children within this richly framed research context.

In this book, the authors have taken a socio-cultural view of research and practice for framing their analysis of early childhood education in the UK, New Zealand and Australia. Many scholars have built on Vygotsky's original writing, with important strands in activity theory, social-constructivism and socio-historical research. The materials introduced in the chapters of this book have foregrounded existing taken-for-granted practices, illuminated historically located activities and problematised cultural practices. As such, the authors have located the historical and the contemporary side-by-side in order to envisage new directions for early childhood education.

This final chapter brings together the emerging themes and concepts presented in the preceding four parts of the book with a discussion of the theoretical underpinnings and their implications for early childhood pedagogy, knowledge, assessment and quality. Collectively, the material contained in this book gives a glimpse of the cultural baggage as well as the cultural capital that we have acquired. Through the rich material presented in each of the chapters, it is possible to see both the transformations of early childhood education in practice and the building of cultural capital for our profession. In bringing together respected scholars of socio-cultural theory in early childhood education from three nations, we seek to build a new community of practice, with new conceptual tools for strengthening our understanding of and practice in early childhood education.

Sociocultural perspectives for framing thinking and practice in early childhood education

Foregrounding socio-cultural debate

Current theorising from a socio-cultural perspective reflects at least three sources of academic debate: analyses of Vygotskian theory that have generated much of contemporary educational interest in socially constructed learning; post-Vygotskian theoretical developments that have challenged and extended original concepts; and recent discourse regarding the complementarity of individual and social explanations of learning.

The centrality of social mediation in Vygotskian theory has been a continuing theme in the educational discourse that acknowledges Vygotsky's challenge to individual explanations of learning and development. In early childhood education, the notion of mediated learning is evident in the focus on relationships that mediate learning. The Vygotskian concept of the zone of proximal development (ZPD) has assisted practitioners to understand that children learn with the support of others and to take a more active teaching role. Likewise, the complementary concept of scaffolding, which refers to the process by which experts assist novice learners within their ZPD, has been widely accepted as a form of teaching interaction that is sensitive to individual learners within informal learning environments. Yet much of this early interest in Vygotskian theory was limited, either by the methodology adopted by researchers or by a superficial understanding of theoretical principles. For example, much of the initial psychological research on scaffolding and the ZPD during the 1970s and 1980s was conducted between adults and children in contrived settings (e.g. Wertsch et al., 1980; Wood et al., 1976). Interestingly, Vygotsky's claim that imaginative play could act as a ZPD did not initiate significant play research in early childhood settings during the 1980s. Similarly, while the notion of a group ZPD was raised by Moll and Whitmore (1993) Vygotskian-derived research in early childhood settings has been more likely to focus on adult-child interactions than on collaborative peer processes.

The Vygotskian concept of cultural tools also received belated attention in early childhood research, despite its theoretical power for explaining the mediation of learning via resources and materials in early childhood settings. It is likely that the delayed interest in cultural tools in early childhood research was part of a broader failure of the educational research community to recognise the historical dimension of Vygotsky's theory (see Cole, 1996, 1997). As Cole (1997: 247) states, 'the specific quality of the human environment is that it is suffused with the achievements of prior generations in reified (and to this extent) a materialized form'. From this perspective, classroom-based analyses of teaching interactions guided by social constructivist perspectives may reflect a focus on immediate contexts of learning but fail to recognise the significance of long-standing beliefs and practices for ped-

agogical practice. During the 1990s, the emergence of post-Vygotskian theorising and research on communities of practice (Lave, 1991; Wenger, 1998) has generated greater educational interest in how beliefs and practices of specific cultures and communities could affect learning in educational settings. Similarly, contemporary developments in activity theory following Leontiev, Luria and others of the Russian school are highlighting the notion of educational resources as tools (see Anning in Chapter 5) as part of its analytic model of learning.

As the debate of the 1990s has highlighted the stronger sense of cultural mediation that is integral to Vygotsky's theory, the polarisation of individual and social explanations of learning, often equated with Piagetian and Vygotskian views, has also been challenged on several fronts (e.g. Glassman, 1994; Packer and Goicoechea, 2000). For example, the concept of a community of learners acknowledges both individual and collective dimensions of a learning community (Rogoff et al., 2001) and co-construction theorists build on the legacy of Piaget's concept of the active learner (McNaughton, 1995; Rogoff, 1998; Valsiner, 1988). Further, post-Piagetian cognitive constructivists and social constructivists are now identifying the complementary nature of their research on children's learning and development (e.g. Astington and Olson, 1995). Such rapprochement has been fostered by greater acceptance of inter-disciplinary perspectives on development, learning and educational thought in the academic community, and the parallel rise of diverse methodologies. In early childhood education, the visibility of the co-construction concept has been supported by psychological work (Valsiner, 1988) and postmodern critical perspectives (Dalhberg et al., 1999). The Reggio Emilia pre-schools in Italy are a prime example of early childhood curricula that could be interpreted from both Piagetian and Vygotskian perspectives (Forman, 1996).

When educational applications of constructivist principles are tracked, it is clear that many versions of constructivism have guided researchers (Marshall, 1996), not all of which have been helpful to practitioners. A distinction between social constructivist research that is more focused on immediate social contexts and socio-cultural perspectives that acknowledge cultural, linguistic and historical constraints does seem to have analytic power. In this regard, Rogoff's socio-cultural work and applications of activity theory warrant particular attention in the early childhood context because of the extent to which they can illuminate educational practices and these key theoretical perspectives are the focus of the following two sections.

Rogoff's three planes of analysis

Rogoff (2003) has argued in her most recent book how socio-culturally framed research differs from conventional research in psychology. She argues that the difference lies in the way researchers frame their data for analysis. She suggests that many scholars examine the way culture impacts on a child, rather than researching

children within a dynamic and evolving cultural context. The former approach she argues is static and disembodied – to observe/research individual aspects of the child outside of the social, cultural and historical context. Cullen discusses the limitations of this approach to observing which fits closely with developmental psychology, whereby the focus of the study is, “*the child*” apart from other people, who are studied separately even when they are engaging in the same event. Then the “*social influences*” are examined through correlating the characteristics of actions of the separate entities’ (Rogoff, 2003: 54). Rogoff argues that in traditional research cultural factors are also treated as separate entities. She argues that what is studied is the influence of culture on the individual child. However, a socio-cultural approach examines not just the child, but the social, historical, institutional and cultural factors in which the child is embedded.

Rogoff argues that ‘the distinctions between what is in the foreground and what is in the background lie in our analysis and are not assumed to be separate entities in reality’ (Rogoff, 2003: 58). Podmore and Carr and Cowie in their chapters argue that we can better understand the individual when the individual is thought of as participating in social relations and cultural activities. Similarly, Siraj-Blatchford in her chapter argues that we can better understand the social relations between individuals if we know the cultural and institutional context and something about the individuals. Finally, Hill and Nichols in their study of home literacies in Chapter 13 exemplify the argument that we can gain greater insight into the cultural/institutional factors if we consider them in relation to the people who give meaning to the cultural tools and rituals. This argument is central to Rogoff’s work: that the lenses continually move back and forth from the intra-personal/personal to the interpersonal to the cultural/institutional. In socio-cultural research, Rogoff suggests: ‘...we see a glimpse of a moving picture involving the history of the activities and the transformations towards the future in which people and their communities engage’ (2003: 60).

Activity theory

Activity theory, exemplified in the work of Engestrom et al. (1999), is also proving to be an important source of theoretical framing to help us research into and try to understand the complexity of learning in early childhood settings. Engestrom’s analyses of the processes underpinning work-based systems acknowledge their complexities and conflicts, rather than attempting to reduce them to simple, reductionist formulae designed to demonstrate ‘what works’.

Like Rogoff’s discussion of socio-cultural theory, activity theory contests the focus of traditional research in psychology on individual behaviours and actions. Instead activity theory focuses on the study of the complexity of human behaviour in social groups and in specific contexts. The premise of the theory is that the contextual features of a task contribute to a subject/actor’s (a child or an adult)

performance on that task. Subjects/actors use tools (such as language, a particular action or a resource) to mediate their knowledge in interactions with each other in learning episodes. But the cultural features of the context in which they use these tools influence the way activities are performed and understood. So for example, a practitioner in a kindergarten setting may use a pencil with a child, using a didactic style of talk, while demonstrating how to write their name on a drawing the child has just completed. In the cultural context of an after-school club, a play worker may use a pencil with that same child, with a playful and reciprocal style of talk, to complete a dot-to-dot puzzle together. The child's performance on the two pencil-based tasks may be quite different. Williams-Kennedy explores such cultural dissonances and their impact on Indigenous children's literacy learning in Chapter 6.

Within activity theory, tools have multiple layers of meaning. For example, in a nursery school context a book may be used to introduce children to literacy conventions – how a story is read, understood and re-represented in illustrations and print. In a home context a book may be used as a source of emotional comfort in a close one-to-one bedtime story ritual as Hill and Nichols discuss in Chapter 13. In an early years setting where multi-agency teams operate together, professionals may use the tool of language in different ways depending on their training, personal histories and beliefs and the meanings embedded in their daily actions. A phrase written on a report card like 'Sarah is making progress' might mean something very different to a speech therapist, a classroom teacher and Sarah's parents. Activity theory gives us conceptual frameworks to explore these multiple layers of meaning.

Engestrom argues that a key process in sharing expertise is 'boundary crossing'. Crossing boundaries involves entering into territory with which we are unfamiliar and therefore in which to some extent we are unqualified. Groups may indulge in defensive posturing to counter the 'threats' of entering new territory. They may throw up obstacles to change. Obstacles are characterised as two opposing forces. One force is 'groupthink' where (often so-called high status) knowledge is defended as exclusive in a closed-minded way. The opposing force is 'fragmentation of viewpoints' where, because members of the group are not prepared to work towards a common language, it is impossible to make decisions. To overcome these two opposing types of obstacles to promoting change requires a major effort of cognitive retooling. Groups need to use 'boundary objects' such as whiteboards to brainstorm new ideas, or a focus on a particular action or case to explore their professional similarities and differences. They also need to use argumentation to confront conflicts and emerge into dialogue. Early years practitioners, mostly women, find argumentation unfamiliar and testing, being cultured into passive and placatory behaviours from birth. In Chapter 4 MacNaughton explores issues related to the acquisition of gender roles and related behaviours.

The complex features of activity systems provide both a rich resource and the potential for conflict. In workplaces parallel activity systems, such as those of the speech therapist and teacher and parent, have the potential to interact to create

new meanings and understandings which transcend the limits of the three separate systems. The interactions between activity systems form the basis of expansive cycles of learning and the transformation of work activities. In expansive learning at work, the notion is challenged that there is a stable and well-defined body of knowledge to be passed down by experts to novices within a community of practice. Engestrom argues that much learning in work organisations is not stable, not well defined or even understood ahead of time. In important transformations in both our personal lives and working practices, we have to learn new forms of activity as we work. Cullen's account in Chapter 6 of the way practitioners have struggled to adapt the principles of the innovative curriculum model, *Te Whāriki*, to inclusive practices for children with special educational needs is a good example as is Fler and Richardson's account of developing approaches to collective mediated assessment in Chapter 10.

Another important feature of Engestrom's work is his focus on knowledge exchange. Within a workplace such as a children's centre, some knowledge will be tacit (demonstrated in actions) and some explicit (evidenced in documentation, dialogue or resources). Engestrom has explored the articulation of professional knowledge at individual and distributed levels by presenting teams of workers with evidence (documents, videos, photographs, tapes) of critical incidents in their workplaces. Prompts to stimulate dialogue about this evidence may focus on knowledge or expertise, contradictions between viewpoints, historical/cultural aspects of systems and activities, when new (expansive) learning has taken place (or not), and how this learning has changed (or not) activities in the workplace. This set of prompts might provide both the stimuli to 'lay out and assess what team members already know' and to challenge them about what new knowledge/expertise has been acquired and activated. This was the basis of the approach used by Anning and Edwards in the project outlined in Chapter 4.

The four themes: current research evidence and future directions

Part 1: Learning and pedagogy

The socio-cultural approach adopted by this book foregrounds the learner: peers learning together in play settings, adults and children learning together in instructional settings, and adults learning together as planners, teachers, assessors and evaluators of curricula for young children. In accordance with socio-cultural principles these adult and child learners are viewed as situated in particular institutional, social, cultural and historical contexts, reflected in the beliefs, artifacts and practices that constrain learning. The research debated by the authors in this book documents evidence of the embeddedness of learning and pedagogy in situated activities, and highlights concepts that are foregrounded when a socio-cultural lens is adopted by researchers and teachers.

Dialogue between participants as a means of establishing intersubjectivity and co-construction through joint involvement in activity is debated by Jordan and by Wood, with regard to adult-child interactions and peer interactions. The notion of dialogue in early education is not new. Pramling's (1996) phenomenographic research incorporated adult-child metacognitive dialogues as a means of increasing children's awareness of their learning. A socio-cultural approach places relatively greater emphasis on acknowledging children's meanings and the explicit co-construction of knowledge but, as Jordan's work illustrates, it is not easy for teachers to relinquish a tutorial role with a preconceived end in view during teaching interactions. The distinction between scaffolding and co-construction that is documented by Jordan illustrates the value of a contextualised approach to theoretically guided research. In the case of scaffolding, psychological research had promoted a tutorial model (e.g. Wood et al., 1976) that is not readily transferable to early years settings. Elizabeth Wood's documentation of scaffolding and co-construction around the use of cultural tools in play settings is a further indicator of how the evolving nature of theory can provide a powerful analytic lens on an activity (play) that has long been viewed as fundamental to an early childhood curriculum (see Chapter 2).

Wells (2000) discusses dialogue as the organising principle of curricular activity which is conceptualised on the basis of Vygotsky's core concept of artifact-mediated joint activity. Conversations with and between children occur in joint activity contexts that promote dialogic inquiry and knowledge building. This should not be a difficult idea to apply to the activity-based early years curriculum. Yet as the work of various authors in this book has shown, there may be mismatches in the meanings that activities portray to children on the basis of their home and community experiences and the institutional expectations embedded in the learning environment. Play activities will not necessarily engage the interests of children from diverse cultures or children with special needs who may have restricted play experiences. Similarly, planning activity-based projects will not necessarily result in shared meaning-making, as Jordan's work suggests. Moreover, issues of power relationships and the conditions of power affecting learning, as debated by MacNaughton, are not easily recognised in a sector that has a long history of nurturing children's development.

The role of tools and artifacts in mediating learning is underlined by socio-cultural theory. This role takes particular significance when reconceptualising pedagogical implications of the historical dimension of a socio-cultural activity perspective. Work with multi-agencies highlights the impact of differing professional philosophies and practices on collaborative services and the challenges this can pose for establishing a shared community of practice. A community of practice approach to professional development is signalled by such pedagogical challenges. While the notion of reflective practice is well accepted in teacher education and professional development, examination of the role of significant beliefs and practices within professional communities has not been salient in this discourse. A cultural

perspective on pedagogy suggests that the shared knowledge of communities of practice could be reified (Wenger, 1998) or stultified if a culture of inquiry is not sustained. Along these lines, future research would likely 'address the relative value of implicit versus academic theory and of research by teachers versus that done by academics' (Genishi et al., 2001: 1205).

In Chapter 11, Siraj-Blatchford presents an argument for teachers as key to an effective pedagogy, based on REPEY evidence about quality early years programmes. Among the REPEY indicators are several that correspond to challenges that emerged in this book: for example, the teacher's curriculum knowledge, verbal interaction skills, and links between assessment and planning. Interestingly, the learning story assessment approach, outlined by Cowie and Carr in Chapter 8, is clearly articulated with the themes of learning and pedagogy but contains an inherent dilemma in maintaining the balance between individual and contextual perspectives. Such challenges point to the need for strong pedagogical leadership within the early childhood field to lead debate and inquiry, particularly in a sector that does not have a long tradition of formal assessment and curriculum requirements. As work on instructional leadership in primary schools suggests (Southworth, 2002), a focus on leaders as learners and their organisational qualities, such as promoting professional dialogue and discussion, should promote effective pedagogy.

Part 2: The nature of knowledge in early childhood settings

Debates about the nature of knowledge operate at the dual levels of *curriculum knowledge* appropriate for the education of young children and *professional knowledge* appropriate for practitioners responsible for promoting young children's learning.

At the level of *curriculum models*, Siraj-Blatchford in Chapter 11 argues that there is still confusion about the impact of attendance at types of settings as opposed to exposure to versions of knowledge (discussed by Anning in Chapter 5) on children's attainments. The truth is we have little empirical evidence about the effectiveness of different curriculum models. In all three countries, the debate about curriculum models polarises 'developmentally appropriate practice', with a strong emphasis on children's choice in determining what they want to learn and 'subject or project' based curricula with an emphasis on adult-initiated decisions about what children need to learn. Decisions about versions of knowledge run parallel to decisions about appropriate pedagogy as discussed in the introduction to Part 1 of this book. A third debate is evidenced in the tension between a curriculum geared for where children are now (as in the culturally sensitive *Te Whāriki* approach in New Zealand), where they will be next (as preparation for schooling in the Foundation Stage in the UK) or where they will be in the future (as in the Innovation/Futures models in some Australian states).

It is clearly unethical to set up controlled, experimental studies designed to test the effectiveness of different curriculum models on young children's attainment. Children only get one chance at a good start to education. Moreover, in the messy, real world of curriculum delivery by different practitioners, to a variety of children, in diverse settings, research designed to measure impact is fraught with practical problems in controlling variables. However, there may be opportunities, implicit in this book, for quasi-experimental studies of naturally occurring contrasts at cross-national levels. How interesting it would be, for example, to follow cohorts of matched samples (on the lines of the EPPE project – see Siraj-Blatchford in Chapter 11) of children progressing through early education based on *Te Whāriki*, the Foundation Stage Curriculum and a Futures Curriculum.

Debates about *professional knowledge* also tend to be strong on assertion but weak on evidence. By tradition the preparation of practitioners to 'teach' young children has been driven by hierarchical/status divisions, with graduate teachers managing teams of poorly paid classroom assistants or nursery officers. It has also been dogged by political interference. The training of teachers has been caught up in government policies such as raising standards in 'the basics' or 'subjects' as Tymms and Merrell point out in Chapter 9, or social control in 'citizenship', or preparing a workforce in 'skills in ICT'. The training of nursery officers/childcare workers, traditionally strong on child development, has been influenced by the rapid expansion of childcare designed to release women as cheap, part-time labour. Combined systems offering education and care have been rebranded 'educare' but as Anning argues in Chapter 5, the sharing and redistribution of professional knowledge in combined centres is a complex and time-consuming process.

In all three countries the imperative to deliver services to young children by multi-agency teams has compounded debates about professional knowledge. What are core, generic knowledge domains and expertise/skills required of all team members (speech therapists, physiotherapists, psychologists, teachers, social workers, health workers, administrators)? What are specific to a role or post within the team? How can knowledge be exchanged in the best interests of the children and their parents? (See Cullen in Chapter 6.) As has been argued above, activity theory provides a particularly useful theoretical model on which to base research in this field.

Part 3: Assessment in early years settings

While socio-cultural theory in early childhood education has progressed significantly, with many countries now reporting that they have evolved their teaching practices accordingly, few have put the same amount of effort into reshaping or retheorising their assessment practices. It is now evident that there is a general lag between early childhood teaching practice and early childhood assessment practices.

When a socio-cultural perspective is taken, it is evident that richer and more immediately useful data on children's learning is gained. Socio-cultural theory has

helped build communities of practice which are both unique and dynamic – for example, as teachers map, record and analyse evidence of the transformation of participation rather than some end point. However, the complexities of this type of assessment practice have two major shortcomings.

Firstly, Tymms and Merrell in Chapter 9 argue that governments will put pressure on teachers to use assessment instruments which will enable them to compare the effectiveness of different kinds of provision across centres, local authorities/states and even countries. Learning stories, discussed by Cowie and Carr in Chapter 8, are not appropriate for quick and easy comparative purposes.

Secondly, Fler and Richardson in Chapter 10 demonstrate that teachers who have spent their whole professional careers using individualistic lenses to observe children, who have been benchmarking their assessment of children based on particular developmental stages, and who have reduced their observations to domains, have found it very difficult to use socio-cultural theory for documenting children's learning. It has already been noted that introducing curricula (such as *Te Whāriki*, as discussed by Cullen in Chapter 6), and culturally framed pedagogy, (as discussed by Williams-Kennedy in Chapter 7 and Hill and Nichols in Chapter 13) which are informed by socio-cultural theory is problematic for teachers.

In working towards the future, early childhood teachers need two types of conceptual tool. The first tool is built upon socio-cultural theory, where documentation of learning moves beyond an individualistic orientation and acknowledges that learning is owned by a community of learners. In building learning stories and in mapping the transformation of understanding greater insights can be gained about children's learning and teachers' teaching. Secondly, the profession needs instruments which can extract from this rich web of assessment activity discrete measures of understanding as matched to government priorities. In all three countries currently government priorities are numeracy and literacy.

When governments wish to use these instruments for accountability purposes, then we should look toward approaches to assessment exemplified in, for example, PIPs, as discussed by Tymms and Merrell in Chapter 9 where teachers can expertly document entry and exit points. As discussed by Cowie and Carr, New Zealand is currently examining the ways in which government can gain information about the nature and quality of learning in early childhood education. Australia has developed a socio-cultural assessment tool for reporting to government, but only for centres which have Indigenous students. The social, cultural and political context of each country determines to what extent the early childhood profession needs and receives resources to support assessment practices.

Part 4: Evaluation and quality in early years settings

Quality in early childhood settings is a much contested phenomenon in the UK (Dahlberg et al., 1999), in Australia (Fler and Kennedy, 2000), in New Zealand

(Duncan, 1997; Farquhar, 1999a, 1999b; Smith and Barraclough, 1997; Smith, 1997, 1999), and in the USA (Scarr et al., 1994). The concept of quality has been debated in many fora (Smith and Taylor, 1996), has been the focus of research reports for parents and government departments (Wylie, 1996, 1999), and has been the subject of consultation with communities (e.g. Australian Commonwealth Child Care Advisory Council, 2000).

...[quality] now plays a dominant role in our thinking, our language and practices. The 'age of quality' is now well and truly upon us, and not just in relation to early childhood institutions, but every conceivable type of product and services. (Dahlberg et al., 1999: 4)

Farquhar (1999a: 7) has commented on this trend, and warns against a 'one-word-fits-all' construct or a universal perspective. Her thoughtful critique of the research literature and her analysis of quality-related documentation in New Zealand suggest the need to introduce 'more precise terminology focused on what we actually mean and are interested in' when we discuss quality. Better conceptual tools are needed if the level of debate is to progress beyond a universal perspective and, as implied by Tymms and Merrell in Chapter 9 to be used for more than an accountability instrument by the government for measuring the success of the profession.

Podmore points out in Chapter 12 that easily measurable indicators of quality have been noted in the research literature including: structural (e.g. staff-child ratios, group size, staff training, education and experience, staff wages and working conditions, and staff stability) and procedural (e.g. staff qualifications) indicators. Ratios have been reported as making a significant contribution to outcomes for children in some countries (McGurk et al., 1995; Scarr et al., 1994), including Australia (MacNaughton, 2000b; Russell, 1985) and New Zealand (Smith et al., 1989), but with Wylie (1989) cautioning that there is no guaranteed formula for determining quality provision in the early years.

Cassidy et al. (1995) present strong evidence of a causal relationship between the level of teacher education and the quality of the programme they provide for young children. This is consistent with recent research in the UK which demonstrated enhanced cognitive and social/emotional outcomes for children when staff had early childhood-related, graduate-level qualifications (Sylva, 2001) and supports Siraj-Blatchford's argument in Chapter 11 for the importance of pedagogic leadership. Other studies have also pointed indirectly to staff qualifications as quality measures. For example, Scarr et al. (1994: 131) have found that 'Regulatable measures did not prove to be acceptable measures of quality care, except for teachers' wage (which is linked to qualifications and experience), which were highly correlated with process measures of quality'. They argued that teacher salary was a useful indicator of centre quality, stating that 'other well-known measures, such as ratios of caregivers to children, group sizes, and staff turnover were less well correlated' (1994: 148).

Process quality indicators are much more difficult to isolate and measure, and as a result research efforts in this area have been limited. Process quality indicators are measures of actual programme experiences by children, such as the social relationships and the interactions between staff and children. Although it is widely acknowledged that process quality indicators are the most important element for measuring quality, very few studies have been directed towards examining the link between process indicators of quality and long-term cognitive outcomes for children. Siraj-Blatchford's work, reported in Chapter 11, is an exception.

Smith et al. (2000: 49) have reported that 'It is difficult to isolate the effect of a single quality indicator because good things go together – especially ratios, group size and caregiver training'. Rogoff (1998) has argued that research that reduces complex processes to isolated variables (as has been the tradition in branches of psychology) no longer captures the dynamic and interrelated nature of complex concepts such as quality. A socio-cultural perspective on quality would build rather than reduce all the contributing variables. A problem with such research is that it is expensive to fund on the kind of large-scale basis of Siraj-Blatchford's work related to the EPPE funded project. A second problem is that making generalisations from less expensive, small-scale studies is inappropriate. However, methodologies have been developed for the meta analyses of many small-scale studies to generate common findings, as has been done in examining evaluations of intervention programmes in the USA. This may prove a useful way forward.

While research literature provides some evidence of ways of measuring quality, caution needs to be exercised in accepting only structural and procedural elements in investigations of quality provision and links to subsequent achievement. Farquhar (1999a: 4) states:

The focus has been on physical capital (e.g. number of staff) rather than on human capital (e.g. staff motivation). Today quality and money are commonly considered to go hand in hand, that is, inputs cost money and therefore the maintenance of positive structural conditions are related to the programme's financial status and funding. Yet we know from the literature outside of early childhood education that quality can not be bought and that the view of quality as consisting merely of inputs is a very narrow one... (Farquhar, 1999a: 4)

Socio-cultural theory has provided early childhood professionals and researchers with alternative lenses to examine issues of quality. In this book a diversity of perspectives on quality were offered. In using a socio-cultural approach, authors have framed their contributions in ways which illustrate more fully the complexities surrounding the concept of quality. For example, Podmore in Chapter 12 implicitly argued that 'quality' can be demonstrated when teachers move their programming framework from 'planning as being about deciding what activities to provide' to planning 'starting from the children's perspectives or questions'. She

argued for the building of a community of learners where co-construction of knowledge takes place. Although the focus is on the individual learner, she foregrounds the role of the adult in this process. This approach to research is richer than simply measuring the variable 'teacher salary' or 'qualifications' in relation to student outcomes.

On the other hand Hill and Nichols in Chapter 13 focus their lens on the cultural and social construction of literacy in the home and in the school arguing that quality early childhood practice is evident when pedagogy is built upon an understanding of the multiple pathways between home and school literacy. However, as Jordan argues in Chapter 3, these connections can only be built when the interactional patterns and perspectives of the teacher are examined in relation to children's home interactional patterns and worldviews. Siraj-Blatchford also foregrounds the role of the teacher in quality provision. She argues that teachers have a responsibility to teach. This is counter-intuitive to how teachers have been positioned in early childhood education where traditionally their role has been perceived as enablers rather than teachers. Clearly, quality cannot be considered without repositioning the role of the adult back into teaching-learning dynamics. Podmore also found when she questioned quality that participants in her study shifted from a concern about external accountability to placing priority on pedagogy highlighting the importance of factoring the teaching process within a quality framework for research.

As we have argued throughout this text, a result of the (mis)interpretations of Piaget's research and theory by early childhood educators is that the role of the teacher has been de-emphasised. In this volume, it is evident that issues of quality and evaluation can only be framed when the teacher is placed back into the teaching and learning context. This of course is consistent with socio-cultural theory, where the role of the teacher is important for building a community of learners (Wenger, 1998), for guided participation (Lave and Wenger, 1991), for everyday cognition (Rogoff, 1998, 2003) for moving from an inter-psychological level of functioning to an intra-psychological level (Vygotsky, 1978) and for supporting scaffolded learning (Bruner, 1996). Perspectives on quality, research into measures of quality and discussions around evaluation processes are better understood when the role of the teacher is embedded in the research process. Examining these socio-cultural interactional sequences as embedded within a complex cultural and social milieu challenges the rather primitive understandings that we have about quality. Clearly, further research is urgently needed if we are to fully appreciate the complexities and diversity of quality that are enacted in our early childhood settings. A socio-cultural perspective has much to offer us for framing our research and in building new theoretical models to examine and explain quality in early childhood education.

Concluding comment: an agenda for the future

This book has aimed to conceptualise early childhood education through a socio-cultural lens on the basis of cross-national research. This organisational and analytic device has yielded a body of debate that itself reflects key dimensions of a socio-cultural perspective – a dynamic and evolving environment and a community of practice where every member is a learner. It is clear that early years researchers from the three countries are designing research that conceptualises research questions in ways that reflect contemporary values and expectations in their particular society and culture, at individual, social and institutional levels. As research has been situated in activity settings that are meaningful to early years researchers, so too have explanations gained in richness and applicability to diverse early years settings. The potential for further research that is framed by socio-cultural theory and is reflexive in nature is signalled by the debate in this book. On this basis, an agenda for research which illuminates practice and informs policy in early years education could incorporate propositions regarding quality early years education that are justified, either logically and/or empirically, by the research evidence displayed and debated by the contributing authors.

Propositions for quality early years education

- Effective practice reflects a culture of inquiry that involves a research-based discourse.
- Teaching is central to quality early childhood education.
- Pedagogical leadership is integral to achieving quality early childhood education.
- Professional development is conceptualised as the co-construction of a community of practice.
- An appropriate curriculum is co-constructed between children and significant others (peers and adults) and is underpinned by close home and centre partnerships.
- Socio-culturally framed assessment practices view knowledge as owned by a community of learners, rather than residing in individuals. Assessment is about participants moving through understanding rather than simply mapping the end product or outcome.
- Enacting socio-cultural theory into practice requires active re-conceptualisation on the teacher's part, and the effort and time needed for this shift has been seriously underestimated.

Collectively, the research evidence from cross-national research, and within country cross-cultural studies, as reported in this book, illuminate political and

institutional norms that have historically been embedded and which have traditionally privileged some groups within our societies. Universal notions of assessment, quality, knowledge and pedagogy, all steeped in particular histories, have been problematised in this book. In foregrounding the cultural and political imperatives across nations, it is possible to critically examine many taken-for-granted practices and to begin to not only understand the 'historical child' but create new and different histories for children and for early childhood education.

The accounts of the early education systems outlined in Chapter 1 of the book remind us that a realistic appraisal of research within a socio-cultural framework must incorporate the constraints and affordances of specific educational systems embedded in their own socio-cultural, political, historical contexts. Yet there is much to be gained from sharing common concerns across the particularities of national boundaries. The challenge for international early childhood researchers and practitioners from a socio-cultural perspective is to establish and maintain a dialectical relationship in which researchers, practitioners and policy-makers increase their dialogue and co-construct common educational goals for a society's youngest members.

PDF | On Jan 1, 2016, Scott Pattison and others published Conceptualizing Early Childhood STEM Interest Development as a Distributed System: A Preliminary Framework | Find, read and cite all the research you need on ResearchGate. A critical topic in the STEM education field and a prominent aspect of recent educational standards and policies. (Committee on K-12 Engineering Education et al., 2009; NSF, 2006; NGSS Lead States, 2013). This increased attention recognizes the need to maintain a strong and robust engineering workforce and to increase the. These to propose a preliminary framework for understanding early childhood interest as a family-level, systems phenomenon. THEORETICAL FRAMEWORK. A Framework for Ontario Early Childhood Settings. Statement of Principles. Early Learning for Every Child Today brings together established research findings and diverse perspectives, beliefs and recommended practices. It recognizes that families, communities and cultures hold distinct values about how young children should experience and interact with the world around them. Values are complemented by detailed attention to the early child development research in the fields of early childhood education, family studies, developmental psychology, neurosciences, anthropology, sociology, pediatrics

Keywords Childcare Access Equity Framework. Background. Early childhood education and care (ECEC) can have substantial beneficial effects on overall child development and educational success for children from disadvantaged backgrounds, making ECEC a powerful strategy to reduce child development inequities (Burchinal et al. 2010; Burger 2010; Vandenberg et al. 2014). Another beneficial effect of ECEC is allowing mothers to go back to work and therefore raising family income and fostering economic development (Fortin et al. 2012; Raynault and Côté 2016). For these Early childhood education is also rooted in the tradition of part-day preschool and nursery programs, traditionally assumed to promote children's social and educational development without consideration of parental needs for full-day programs. Part-day preschool programs operated within the private sector are subject to child care facility licensure in approximately half of the states. This conceptual framework bridges the historical divisions between child care and early education with a unifying and inclusive vision of high-quality services for all children and families and is based on the following assumptions: All young children, birth through age eight, should have access to high-quality early childhood education services.