

## **Quality of the early years provisions: an European perspective<sup>1</sup>**

Paul P.M. Leseman  
Utrecht University

### **Introduction**

The flagship initiative ‘Youth on the Move’, which is part of the European Union’s Europe 2020 Strategy, emphasizes the importance of creativity and innovation for Europe’s competitiveness and preservation of current standards of living. In this context, all young people must have the opportunity to develop their talents to the fullest possible extent. Early Childhood Education and Care (ECEC) is attributed a key role in reaching this goal. And indeed, the potential benefits of ECEC are manifold and they concern personal development, physical and mental wellbeing, educational success and equity, social integration, employability, and skills for life-long learning. This is good news for everyone working in ECEC, but, be aware, there are also many challenges. Can we indeed meet the high expectations?

At the European Council in Barcelona in 2002, member states agreed to provide full-day care to support parents in work to at least 90% of children between three and compulsory school age by 2010. In 2009, the Ministers of Education set a new benchmark for early education: at least 95% of children between age 4 and compulsory school age across Europe should be able to participate in ECEC by 2020. Clear policies have been defined for the expansion of ECEC, but the *quality* of ECEC has received remarkably little attention. Yet, the evidence indicates that quality is crucial to the benefits of ECEC. To quote Kathy Sylva of Oxford University: “Low quality may do more harm than good”. So, here is another urgent question: Is the current quality of ECEC good enough? Can we improve quality?

Preparing children for the challenges of European citizenship for 21<sup>st</sup> century is a major task for ECEC. These challenges include language and reading skills, mathematical literacy and science literacy (OECD, 2010), but should go beyond mere academic proficiency and include also social competence, creativity, democratic citizenship and moral values, calling for a holistic approach to ECEC. Whereas most of us would agree with the holistic approach to ECEC, the question is: can we indeed reconcile all these interests and serve all these goals equally well, and still provide ECEC that is feasible and affordable and, most importantly, a very pleasant experience for children?

There are new challenges for ECEC, arising from the increasing cultural and linguistic diversity in current societies. Many children from immigrant families are second language learners of the majority language and may need extra support. Do we deal adequately with multilingualism? Moreover, different cultural beliefs and values on important developmental and educational goals prevail. Therefore, an urgent question is to what extent current ECEC in Europe with its typical play-based and child-centered practices can accommodate the beliefs and expectations of non-mainstream cultural communities. This question is also important in view of the inclusiveness of ECEC, because, as I will review later, there may still exist cultural thresholds that limit access to and use of ECEC which have to do with divergent cultural views.

---

<sup>1</sup> Extended text of the key note lecture at the TODDLER Conference, Ghent, Belgium, 8 October 2013.  
Correspondence: p.p.m.leseman@uu.nl

Quality of ECEC is a crucial factor in producing beneficial outcomes. I will not review the extensive evidence, but this is the conclusion of many reviews and long term studies (EACEA-Eurydice, 2009; Melhuish, 2011; Vandell et al., 2010). Quality, however, is not an unproblematic concept and different views on quality prevail. A divide exists between a psychological approach stressing certain universals of quality as revealed in child development research, and a dialogical approach that emphasizes the process of recurrent negotiation of ECEC practice between stakeholders, in particular parents and staff (Melhuish, 2004; Dahlberg et al., 2007; Fenech, 2011; Tobin, 2005). Sometimes this position boils down to cultural-relativism – any form of ECEC is good enough, if it reflects the local culture and has the consent of all stakeholders (Tobin, 2005). I do not agree with this extreme position, but, clearly, taking into account the views of parents and cultural communities in constructing quality is essential.

Evidence for the beneficial outcomes of ECEC and for the moderating role of quality comes from quantitative studies with an universalist approach – and that's why these studies are so important - but in-depth studies of how quality concepts are put into practice and how, in practice, they are geared to the views of important stakeholders, reveals considerable cultural variation in what is considered high quality and child wellbeing, both between and within countries in Europe. Here is a challenge for professionals, service providers, teacher educators, policy makers and researchers alike: to define and implement a quality concept that integrates scientific knowledge, the interests of all stakeholders and the different cultural views on what is good for children in the broader context of their current and future functioning in our European society. Today, I hope to provide some starting points for this major endeavour.

In the remainder, I will review current research that may inform this reconsideration of what constitutes high quality in ECEC. I will start with a brief clarification of the issue and of the different uses of terms like quality, curriculum and pedagogy. In doing this, I will address both the scientific evidence and the possible cultural issues at stake, with special attention to European research.

### **Curriculum, pedagogy and quality**

Let me begin with some terminological clarifications. In the field of ECEC, the term quality is mostly used as an overarching multidimensional concept referring to the extent to which ECEC provides an environment that enhances child development and child wellbeing. In order to identify starting points for improving the quality and increasing the impact of ECEC, three aspects of quality should be distinguished.

*Process quality* refers to the child's daily experience (Howes & Smith, 1995; Layzer & Goodson, 2006; Phillips & Lowenstein, 2011; Sylva et al., 2011). Studies have identified characteristics such as (1) teacher-child interaction that is responsive and affectionate and characterized by a high level of verbal stimulation, guidance and scaffolding, reflected in the quality of the teacher-child relationship, (2) a general positive affective classroom climate with positive social relationships between children, and (3) opportunities to learn and to develop competences (Buyse et al., 2008; Cadima et al., 2010; Hamre & Pianta, 2001; Howes et al., 2008; Lerkkanen et al., 2012; Rimm-Kaufman et al., 2009; Thomason & La Paro, 2009).

In addition there are aspects to the quality of ECEC that are relatively stable from day to day, and this is referred to as *structural quality*. Structural quality includes aspects such as the design and furnishing of the indoor and outdoor space, available play and learning materials, group size, children-to-staff ratio, committed and stable staff, and staff professional competences. Structural quality characteristics are seen as distant determinants of child outcomes and they are thought to determine child outcomes *via* process quality (Burchinal et al., 2002; Howes & Smith, 1995; Howes et al., 2008; Sylva et al., 2011). One of the outstanding issues is how strongly process quality and structural quality are related. Note that structural quality is about the costs of ECEC, whereas process quality is about the benefits. If the relationship is weak or inconsistent, ECEC is from an economic point of view not efficient.

The third aspect is about the *what* of ECEC. Children's experiences have content and serve particular developmental and educational goals: what is it that they learn, which competences do they develop? Planning what children can experience by the activity settings offered to them and which competences and skills they can develop by engaging in these activities, is referred to as the *curriculum* (Oberhuemer, 2005; Pianta et al., 2005; Sylva et al., 2007). Following Pamela Oberhuemer, the most important function of the curriculum is to *coordinate* between the different contexts of child development – the family, the neighborhood, the preschool, the school, and the wider society - in order to provide consistent support to children's development across contexts and over time, while striking a balance between the interests of the children themselves, the values and goals of their parents and families, the requirements for school, as well as the long term social and economic interests of the wider society (Oberhuemer, 2005). It is because of this coordination function that the ECEC curriculum is, and should be, a topic of continuous debate in order to reach broad consensus.

### **Social-emotional and personality development**

According to child development research, core developmental goals in the preschool period are: establishing emotionally secure relationships with caregivers, fostering emotional independence and establishing social relationships with peers (e.g., Kochanska et al., 2000; Phillips & Lowenstein, 2011). Conditions that are thought to support emotional, social and personality development in early childhood are: caregiver sensitivity and affection, stable and predictable social relationships with peers, the use of verbal explanations of what is allowed and not, and the provision of activities that allow the child to actively explore his or her environment in a relatively independent way in order to experience competence and self-efficacy. Current concepts of curriculum and quality in ECEC reflect these goals. For example, widely used quality assessment instruments such as the CIS, CLASS, ECERS-R, ITERS and ORCE, to mention a few, all contain scales to evaluate teachers' sensitivity and emotional support to individual children, and all evaluate to what extent children's autonomy development is supported by allowing them initiative and choice. But translation of psychological theory in ECEC practice is not unproblematic. Are these aspects indeed as universal as we seem to think?

Studies in non-Western cultural communities, including immigrant communities in Europe, reveal important differences in emphasis concerning in particular the value of emotional independence, emotion regulation and expectations regarding children's behavior towards adults (Greenfield et al., 2003; Kağıtçıbaşı & Ataca, 2005; Pels & De Haan, 2006; Tulviste et al., 2012). Emotional independence is associated with the broader individualistic cultural model of Western societies, whereas interdependence is typically found in collectivistic cultures, while the value attached to the mixed concept of being both autonomous *and* related reflects cultures in transition towards more individualism such as communities that recently migrated from a collectivistic to individualistic society. These differences in cultural models can have profound consequences for evaluating ECEC practice and in particular the quality of teacher-child interactions. For example, Heidi Keller and her colleagues (Keller et al., 2006), in an international comparative study, observed marked differences in the behavioral preferences of adults in interactions with their children relating to different perspectives regarding the independence-relatedness dimension. Preferences for individual face-to-face contact, stimulation of object-play, rewarding positive behavior instead of reacting to negative behavior, and a verbal style of behavior regulation reflected the individualistic independence model of Western countries, whereas preference for bodily contact and bodily stimulation, reacting to negative behavior, and physical regulation of behavior rather than verbal regulation, was associated with the collectivistic model of relatedness and interdependence found in non-Western cultures.

Similar patterns are found in studying non-Western immigrant communities in European countries. In a study by Citlak and colleagues in Germany, German mothers emphasized psychological independence, emotional self-control and feeling good as important values in child

rearing, whereas Turkish-German mothers attached high value to personal achievement, school readiness, inhibition of emotions, good demeanor and strong relationships with the family (Citlak et al., 2008). Likewise, in a Dutch study with first and second generation Moroccan-Dutch parents, Pels and De Haan (2007) found that emotional autonomy has become more important among second generation Moroccan-Dutch parents compared to the first generation, but compared to Dutch parents conformity, being well-mannered, considerate, modest and socially responsible, and showing unconditional respect to authority figures were still highly valued.

Even within Western communities, the same valued goal of independence is sometimes rather differently defined and practiced (Harkness et al., 2000; Keller et al., 2006; Suizzo, 2003). For example, US and Dutch middleclass parents find development of independence in early childhood equally important, but in the US context this means stimulating competitiveness, expressiveness and becoming smart, whereas in the Dutch context independence means promoting modesty, self-regulation of emotions and self-reliance (Harkness et al., 2000). French middleclass parents are similar to US middleclass parents in valuing cognitive stimulation and independence, but they also stress proper presentation of the child, emotion regulation rather than expressivity, and good manners (Suizzo, 2003).

In view of the enormous cultural diversity in current societies, Miriam Rosenthal (2003) doubts whether a universal quality concept is tenable and helpful, however she also warns that one should avoid the extreme position of cultural relativism. I agree with her. The challenge is to examine what is common to all cultures and what is culturally specific for successful membership of the community.

### **Curriculum and pedagogy – striking a balance**

The question of what constitutes an appropriate curriculum and pedagogy for children in ECEC has raised debate that still continues. The debate centers around the developmental and educational goals of ECEC, the role of play and academic content in the curriculum, and what can be considered appropriate ways of interacting with young children. Current policies in many countries tend to emphasize academic goals – that is, preparing for reading and mathematics, often through direct instruction. However, a strong emphasis on academic content and direct instruction can be at the expense of promoting social-emotional development and important learning-related skills, such as cognitive control functions and self-regulation, as research has shown (Barnett et al., 2008; Blair & Diamond, 2008; Lillard & Else-Quest, 2006; McClelland et al., 2006, 2007; Marcon, 1999, 2002). I will return to this point.

In the European early childhood curriculum three main traditions can be distinguished: the ‘traditional’ social pedagogy based on Pestalozzi, Froebel, Montessori and Steiner, the ‘academic’ pedagogy based on school subjects and skills with school readiness as major goal, and innovations such as Reggio Emilia and Pistoia in which play and learning are integrated through an investigative pedagogy (Bennett, 2005; Nourrot, 2005; Pramling & Pramling Samuelsson, 2011). In addition, the child development theories of Piaget and Vygotsky have been influential in European ECEC. These theories, and the research based on these theories, underlie views on the child as active learner, and support the importance of peer play, adult guided play and co-constructive educational dialogues. In the USA, a comprehensive framework has been developed for ECEC, based on developmental research but also inspired by European social pedagogy, which is called Developmentally Appropriate Practice, or DAP (Bredekamp, 1987).

The social pedagogical approaches have influenced ECEC practice in Europe profoundly. However, by being integrated in national systems they have also become adapted to local circumstances, cultural values and policy priorities, and they have often been combined with other approaches (e.g., academic curricula) into eclectic and conventional programs (Kammerman, 2006; Lillard, 2012).

Cross-cultural comparisons of curricula in Europe show both commonalities and differences which reflect local traditions, cultural values and priorities of the national child and education policies (Alvestead & Duncan, 2006; Bennett, 2005; Ceglowski, 2005; Pramling Samuelsson & Fleer, 2009; Sheridan & Schuster, 2001; OECD, 2006). Cross-cultural comparisons based on official documents (e.g., the national curriculum) and statements of ECEC professionals and experts show agreement on a view of the child as active learner and involved in his own development; the importance of allowing children choice and initiative; and the importance of partnerships with parents (Alvestead & Duncan, 2006; McMullen et al., 2005; Pramling Samuelsson & Fleer, 2009). However, there are also differences, which concern in particular the developmental and educational goals of the curriculum: should it be about broad personality development or should academic competence be emphasized? Based on the Starting Strong review (OECD, 2006), Bennett (2005) proposes to distinguish national approaches to curricula along a continuum from an orientation on broad developmental goals to focused cognitive-academic goals. The social-pedagogy tradition characteristic for curricula in the Nordic and central European countries exemplifies the developmental approach, whereas the educational orientation of, for example, the French and Belgian preschool system and the implementation of specialized academic skills curricula exemplify the opposite pole of the dimension. Can both orientations be right? And how can we decide that? Obviously, professionals should have a voice in this matter, but what about the wider society and what about parents? And what does research on outcomes reveal?

In the Children Crossing Borders project (Tobin et al., 2010; Adair & Pastori, 2011) the views and expectations of immigrant parents regarding the curriculum and pedagogy of ECEC in France, Germany, Italy, England and the USA were examined. Videotapes of practices in preschools serving immigrant children in each country, and considered typical for the country's approach, were used as material for focus group discussions with parents and teachers. The results indicated that immigrant parents in all countries tended to emphasize academic goals more than the ECEC teachers did and they also preferred a more authoritarian and teacher-centered pedagogy (Tobin & Kurban, 2010). For example, Turkish parents in Germany found the play-based social-pedagogical curriculum of German preschools odd and ill-suited to their own preferences and their own perceptions of children's educational needs. Turkish immigrant parents in France agreed very much on the structured educational approach of teachers in French preschools.

What, then, is to be recommended? Empirical research into the effectiveness of traditional social pedagogies and innovative pedagogies (Reggio Emilia and others) curricula is limited, and virtually non-existent in Europe (Bennett, 2005). Large scale studies on the effects of universal preschool in European countries with a predominantly social-pedagogy tradition (Norway, Denmark, Germany) may provide indirect evidence favoring this tradition (Bauchmuller et al., 2011; Havnes & Mogstad, 2009), but the overall effects tend to be small, they may not concern all children as was found in Germany (Spiess et al., 2003), and they cannot be unequivocally attributed to the curriculum. Other factors, not intrinsically related to the curriculum, such as staff professional competence and structural quality characteristics can also have contributed to the effect. Moreover, large scale studies on universal preschool in countries with a predominant academic orientation rather than a social-pedagogy approach (e.g., France) are also found to be effective (Dumas & Lefranc, 2010), yet also with relatively small effect sizes. However, recent evaluations of the Montessori approach in the USA and Turkey demonstrate that comparative research can be useful and can contribute to maintaining high quality ECEC practice by increasing awareness of what matters (Lillard & Else-Quest, 2006; Lillard, 2012; Kayili & Ari, 2011). For example, the findings of the Milwaukee Montessori kindergartens evaluation study clearly support the effectiveness of the Montessori curriculum compared to eclectic conventional approaches, also in view of currently valued developmental and educational outcomes such academic skills, but also self-regulation and creativity (Lillard & Else-Quest, 2006). Although other studies of the Montessori curriculum failed to find effects, Lillard (2012), in a reanalysis, shows that high fidelity implementations of the Montessori curriculum, preserving the original concept and approach best, are more effective than adaptations

of Montessori and eclectic approaches. Note, however, that the Montessori curriculum is quite academic.

### ***Pre-academics***

Do we need academic content in ECEC? I think so, especially in view of giving children from lower income and minority families a fair start. What do we know?

Acquiring basic vocabulary and some knowledge of literacy, including letter knowledge, phonological and print awareness in the preschool period supports children to benefit from reading instruction in school (Dickinson, 2011; Justice et al., 2008; Leseman & Van Tuijl, 2006; Sénéchal et al., 2008). Knowledge of sophisticated, 'academic' vocabulary and complex grammar further supports children to benefit from instruction in reading comprehension and instruction in subjects in later grades (Fang, Schleppegrell, & Cox, 2006; Scheele et al., 2012; Weizman & Snow, 2001). Informal learning of number words and mathematical concepts in the preschool period restructures children's number representations and mathematical intuitions, and is related to children's mathematical skills in primary school (Clements & Sarama, 2011; Jordan & Levine, 2009; Klibanoff et al., 2006). Everyday experiences, both indoor and outdoor, with exploring a variety of materials, technical artefacts, plants and animals provide rich sources for learning about a wide range of scientific phenomena, increase understanding of the physical and biological world, elicit reasoning, prediction and explanation, and the use of complex language (Greenfield et al., 2009; Snow, 2010).

Many studies conducted in several different countries have shown that language, literacy, mathematics and science experiences at home are an important factor in preparing children for school, but these same studies also show strong effects of the family's socioeconomic status, parents' level of education and their literacy engagement, and the family's cultural background, leading to inequalities at an already early age (Jordan & Levine, 2009; Leseman & Van Tuijl, 2006; Melhuish, 2010; Scheele et al., 2012; Tudge et al., 2003). It is called the early education gap and reducing this gap is an important task for ECEC. Therefore, the early development of academic skills and their precursors should be supported and be part of the curriculum, but this can be done in a way that respects principles of social pedagogy – as in the Montessori curriculum and in other developmentally appropriate education programs. I will return to some of these approaches when talking about so-called comprehensive programs.

### ***Play and educational dialogues***

But what about play? Are policy makers, at least in some European countries, right in trying to abandon play from the early childhood curriculum? No, they are not, but we should strengthen our arguments in favor of play and we should look at possibilities to integrate play with academics.

Recent evidence indicates that high quality ECEC involving play and collaborative work may be particularly important for the development of cognitive control and self-regulation, seen as important learning-related skills (Diamond et al., 2007; Diamond & Lee, 2011; McClelland et al., 2006). Cognitive control involves a set of neurocognitive functions including working memory, flexibility and inhibition, that control children's exploration, learning, skill development and creativity. Cognitive control is a stronger predictor of school achievement than IQ (Blair & Diamond, 2008; Bull et al., 2008; St. Clair-Thompson & Gathercole, 2006; Van der Ven et al., 2011). A related concept is self-regulation, which is defined as the ability to adapt behaviour to situational demands in view of important goals while inhibiting the impulse to obtain immediate rewards. Self-regulation in early childhood is closely related to engagement and metacognition in school-age (Boeckaerts & Corno, 2005). Self-regulation is also related to prosocial behavior, competence to collaborate, and empathy (Kochanska et al., 2000).

Development of cognitive control and emotional self-regulation in early childhood has been found to be promoted by peer interaction in pretend play (Berk et al., 2006; Bodrova, 2008; Diamond & Lee, 2011; Leseman et al., 2001; Lillard & Else-Quest, 2006; Lillard et al., 2012). Pretend play requires children to establish a shared imagined world. They have to negotiate what to do, coordinate their roles and reconcile differing motives, decide on the global plan, while updating the

plan as the play evolves. Sociodramatic play with children taking up symbolized roles, in addition, requires children to imagine others' state of mind and allows them to experiment with emotions. Evidence indicates that sociodramatic play is indeed related to the development of emotional self-regulation (Elias & Berk, 2002).

Recent research specifically focuses on the role of talk to communicate with each other and to build meaning and understanding in education and care settings (Dickinson, 2011; Mercer, 2011). Language is a powerful tool for exploring ideas and creating common knowledge together in different content domains (Mercer & Littleton, 2007; Rasku-Puttonen et al., 2012). In the British EPPE project an in-depth analysis was conducted of teacher-child talk in those ECEC centers that were found most effective in fostering both academic skills and social-emotional competences in children. The results revealed that adult-child talk in these centers was characterized by frequent episodes of sustained shared thinking (Sylva et al., 2010), that is, by relatively long coherent dialogues about interesting topics with balanced roles of adults and children.

Here is the challenge for teachers, teacher educators and curriculum developers: how can we integrate pre-academic content in playful activities and educational dialogues? How can we support pre-academic development and at the same time foster self-regulation and social-emotional development?

### **Multilingualism & cultural diversity**

Let's turn to the challenge of increasing linguistic diversity in our current societies. Evidence indicates that acquiring two or more languages *simultaneously* to native-like proficiency in both languages is possible and can have several advantages, provided that the quantity, quality and variety of language exposure is sufficient (Bowers & Vasilyeva, 2011; Place & Hof, 2011; Unsworth et al., 2011). Bilingual children develop better cognitive control skills, have increased metalinguistic awareness, including reading related phonological awareness, and greater total language knowledge (Barac & Bialystok, 2012; Blom et al., 2013; Carlson & Meltzoff, 2008; Engel de Abreu et al., 2012; Kovelman et al., 2008). Moreover, in a globalizing and increasingly multilingual world, proficiency in more than one language is clearly an asset. Similarly, acquiring a second language at a later age, or *sequential bilingualism* as it is called, to (near) native-like proficiency is possible as well, if learning the second language starts early in the preschool period, preferably before the age of four (Kovelman et al., 2008; Unsworth et al., 2011).

Sequential second language learning has similar cognitive advantages as simultaneous bilingualism if both languages are sufficiently developed and used on a daily basis. Moreover, there is evidence that second language learners can profit from a well-developed first language, because many aspects of first language knowledge (and of the general knowledge acquired through the first language) transfer to the second language. This holds in particular for more complex language skills (e.g., conceptual knowledge, discourse comprehension, academic language, literacy, and mathematical language; Scheele et al., 2010; Ucelli & Páez, 2007). Crucial for bilingual development, in addition to sufficient time, is the linguistic quality of the input (preferably from native speakers).

Several studies in Europe (concerning Finland, France, Germany, Hungary, Italy, The Netherlands, Sweden and the UK) and outside indicate that, given the choice, most immigrant parents and also parents from indigenous language minorities value maintenance of the first language and are willing to spend effort in helping children to maintain the first language (Moin et al., 2011; Nesteruk, 2010; Paciotto, 2009; Szeci & Szilagy, 2012; Yagmur, 2004). Their reasons include the role of language in identity formation and child wellbeing, the transmission of the parents' culture, contact with relatives and contact with the home land. Current policies in many European countries, however, tend to emphasize second language learning in ECEC, and in most countries both the preschool and school systems usually provide immersion programs in the second language. Without further support, this can lead to loss of the first language, especially in low educated immigrant communities with limited resources (Scheele et al, 2010; Wong Fillmore, 1991). However,

a different policy is possible, at least according to research findings. There are bilingual (transition) programs that provide both first and second language support for language minority children, at least to a certain age, and research shows that these programs are as effective as second language immersion programs for second language acquisition, but, in addition, they also support first language development (Barnett et al., 2007; Durán et al., 2010; Winsler et al., 1999).

Countries within Europe differ strongly in the support offered to language minorities to maintain the first language (Berry et al., 2006). For instance, in the Scandinavian countries, immigrant children are still entitled to bilingual education, whereas in countries as France and the Netherlands the focus is on learning the majority language and on assimilation of the national cultural identity. Overall, political support for language maintenance in immigrant communities has declined in Europe in the past decades, often with the pretext that this will stimulate the integration of immigrant communities. Paradoxically, however, as a study by Berry et al. (2006) among youth in 13 European countries suggests, immigrant youth has better mental health and better school achievement, and they integrate better, in countries that do not force assimilation of the majority language and culture, but instead support maintenance of the minority's own language and culture. Thus, integration of cultural and linguistic minorities is better served by explicit respect and support for their own cultural identity, including their first language.

To implement such a policy in ECEC, of course, will encounter many difficulties and even practical impossibilities. For example, in a mixed classroom with up to 10 or more different first languages, as is sometimes found in inner-city areas, it is impossible to implement a bilingual program and to hire qualified teachers for each language. In that case, providing parents and communities with education programs that they can work with at home or in a community center, in parallel to the education program in the ECEC center, is a good alternative. Implementing such an approach in the Netherlands with Turkish-Dutch immigrant families and preschoolers showed promising results: compared to controls, children who received the home-based program had accelerated development in first language skills and, remarkably, also in conceptual knowledge and mathematical skills in Dutch, while their Dutch language skills also improved due to participating in the Dutch language preschool (Leseman & Van Tuijl, 2001).

By the way, there is an intriguing paradox in this connection. In several countries so called dual immersion programs gain in popularity, also – or especially - among parents. Dual programs provide care and education in two languages during roughly equal amounts of time. However, this mostly concerns high-status (other European) languages, mostly English, next to the majority language, whereas immigrant languages do not get support.

## **Improving quality, outcomes and societal impact**

### ***Raising structural quality***

A central issue for most European countries is not whether to invest in early childhood education and care, but how much and at what level (OECD, 2006). Investments in ECEC concern the supply of provisions for ECEC and, within these provisions, structural quality aspects, such as group size, children-to-staff ratio, staff education level and staff salaries. These are the regulatable aspects of ECEC quality and they are major factors in the costs (Mashburn et al., 2008), but how strongly structural quality relates to process quality and to child development is another matter and this relationship may differ between types of ECEC provision, age of the children enrolled and countries.

In studies in the USA and Canada, high process quality has been found to occur more frequently in daycare centers and preschool classrooms with small group sizes and low child-to-staff ratios (Cost, Quality & Child Outcomes Study Team, 1995; Goelman et al., 2006; Howes & Smith, 1995; Love et al., 2003; Mashburn et al., 2008; NICHD ECCRN, 2006; Phillips et al., 2000). Also higher staff salaries and, related to this, lower turnover rates have been associated with higher process quality, especially in daycare (Goelman et al., 2006; Phillips et al., 2000). However, other studies found no relationships between structural characteristics, process quality and child outcomes



(Mashburn et al., 2008; Pianta et al., 2005). European studies and international comparative studies including European countries also show mixed findings, with some studies confirming and others disconfirming the relationship between particular structural quality characteristics and process quality (Barros et al., 2010; Cryer et al., 1999; De Kruif et al., 2009; Montie et al., 2006; Pessanha et al., 2007; Rentzou & Sakellariou, 2011; Slot et al., 2013).

The inconclusive evidence suggest that the effects of structural quality characteristics on process quality and child outcomes have complex interactions in which factors can act in opposition and moderate the effect of another factor. For example, a high children-to-staff ratio can be compensated by a high level of professional competence of the teacher or by efficient classroom management. Likewise, a developmentally appropriate curriculum, with a good balance between play and academic activities, with rich curiosity eliciting materials and a child-centered focus, allowing children choice and independence, can compensate for a relatively big class size because children use the time optimally – there will be less waiting or wandering around, and children are constantly engaged, which will reduce the incidence of negative and conflictive social interactions. It is challenge for research in the near future to find out which combinations of structural quality characteristics provide optimal conditions for high process quality in the most efficient way. I am quite sure about one outcome of this research. It will *not* be: ‘one size fits all’.

### ***Using an explicit education program or curriculum***

The use of a structured education program or curriculum, with an explicit plan of activities and time-schedule for providing these activities, with detailed instructions to the teachers, sample activities and materials, and training, mentoring and monitoring activities for teachers to support implementation, can contribute to enhancing quality as well. Several studies, involving children from 3 to 5 years of age, have shown that the use of educational intervention programs to promote pre-academic skills by providing language, literacy and numeracy activities can be effective, at least as far as the targeted skills are concerned (Bus, Lesemann & Neuman, 2012; Clements & Sarama, 2011; Dickinson, 2011; Fantuzzo et al., 2011; Lonigan et al., 2011). Also, interventions focusing on social-emotional competences are found to be effective in the targeted social-emotional domain (e.g. Domitrovich et al., 2007).

Comprehensive curricula with a developmentally appropriate and child-centered pedagogy and a holistic approach - that is, with broad ranging developmental and educational goals - such as, for example, High/Scope and recently Tools of the Mind, Head Start REDI, Creative Curriculum, and others have been compared with both focused academic approaches and conventional ‘eclectic’ approaches. The evidence generally favors the comprehensive approach if broader (and long term) developmental outcomes, including social emotional development, self-regulation and child wellbeing are evaluated (Schweinhart & Weikart, 1997; Barnett et al., 2008; Diamond et al., 2007; Dickinson, 2003; Bierman et al., 2008; Fantuzzo et al., 2011; Lambert et al., 2008).

An interesting example is the Head Start REDI program. In a randomized controlled experiment Bierman et al. (2008) and Domitrovich et al. (2009) studied the joint effects of the Program for Alternative Thinking Strategies (PATHS) and an interactive storybook reading intervention added to a regular Head Start curriculum, reflecting the broad social-emotional and academic goals of the program. PATHS was intended to increase emotional self-awareness and self-regulation, social problem solving skill and social competence. The storybook reading intervention focused on educational dialogues and the use of complex language. The intervention was found to increase executive functioning in task behavior (work attitude, focused attention, persistence), self-regulation and academic knowledge alike. Interestingly, the effect of the program was largely mediated by effects on the teachers. In a parallel study, Domitrovich et al. (2009), focusing on the teachers, found clear effects of the professional development program added to the intervention, consisting of a three-day workshop at the beginning of the year, a booster-workshop half way the year and intensive curriculum-based mentoring with weekly classroom observations and collective feedback sessions guided by trained mentors, using video recordings and group discussions, focusing on language use, social-emotional problem solving and positive classroom management as intended

by the program. Teachers who followed the professional development program talked more frequently with their children, provided more complex language use, created a more positive classroom climate and showed better preventative behavior management, with medium to large effect sizes.

### ***Continuous professional development***

European countries show a large diversity in education and training approaches and in statutory education requirements for ECEC staff (OECD, 2006; EACEA-Eurydice, 2009; Oberhuemer, 2011), which depend on the national systems and priorities. At the policy level in many countries, consensus is growing that ECEC professionals should have a bachelor's degree or equivalent, including specific qualifications for ECEC, but whether this is the most costs-effective strategy to increase ECEC quality and impact is still undecided.

Several studies, in Europe, the USA and a few other countries, have shown that the level of formal pre-service education of workers in ECEC and, in addition to that, specific training in working with young children relate to curriculum implementation, classroom process quality and developmental and academic child outcomes (Burchinal et al., 2002; Fukkink & Lont, 2007; Montie et al., 2006; Rhodes & Hennessy, 2001; Zaslow et al., 2010). However, the evidence is not conclusive (De Haan et al., 2013; Early et al., 2006; Leach et al., 2006). For example, Dianne Early and colleagues (2006), in a large scale multi-site and multi-state study in USA center-based daycare and pre-kindergarten, found mixed effects of different levels of general education on classroom quality. Caregivers and teachers with more than a bachelors degree had higher classroom quality than teachers with a degree below the bachelor level, but there were no differences between the bachelor and the below-bachelor degrees. Similarly, specific early childhood training mattered when teachers had lower general education, but made no difference at or above the bachelor level. With regard to children's academic skills, teachers with a bachelor or higher degree had better outcomes in maths and problem-solving, but not in language and literacy.

In a Dutch study among 3-6-year-old disadvantaged children in preschools, De Haan et al. (2013) found no effects of teacher education and special training in a comprehensive curriculum on the observed time spent on language, literacy and math activities in the classroom. However, teachers differed quite strongly in providing these activities and the degree in which they provided these activities did predict growth in vocabulary, emergent literacy and emergent numeracy skills in children with medium effect sizes.

A possible explanation, at least in part, for these mixed findings is the provision of additional on-the-job training, coaching-on-the-job and systematic quality monitoring at the center level to support continuous professional development, which may differ between centers (Early et al., 2007; Howes et al., 2008; Landry et al., 2009; Piasta et al., 2012; Zaslow et al., 2010). Based on an extensive review of research in early childhood teacher professional development, Zaslow et al. (2010) conclude that in professional development a focus on practice, combined with specialized courses that are directly related to practice, collective participation – as a team - in professional development and the use of child assessments to evaluate practice is particularly effective for quality and outcomes. In line with this, a recent European study emphasises that competence of ECEC professionals should not be seen as a static individual characteristic of the teacher, but instead as dynamic continuous reflective practice within the organisation and the wider ECEC system (CoRe, 2011; see also Howes et al., 2008).

The Italian ECEC system is an interesting case in this context. Whereas it is generally assumed that the Italian system provides good to excellent process quality in most centers and an exemplary educational curriculum, with well-known examples as Reggio Emilia and Pistoia, the structural quality is not exceptionally high and the required education level of regular ECEC staff in most centers is below-bachelor (Hewett, 2001; Mantovani, 2001; Musatti & Picchio, 2010). Typical for the Italian approach, however, is the significant number of paid hours for in-service training allocated to staff members, the obligation of centers to invest in continuous staff professional development and the employment at the municipality level of academically educated pedagogues who support the staff in

continuous professional development. Denmark provides another interesting case. Recently the large-scale professional development program VIDA was launched based on the principles of a reflective and dynamic approach to professional development at the personal, but especially at the team and organizational levels, using critical-reflection groups, integration of knowledge through new activities, and models of organizational learning. There are not yet research results available.

A recent study in Dutch day care centers and preschools for 2- to 4-year-olds, examined the effects of structural quality characteristics on process quality. Structural quality characteristics such as group size, children-to-teacher ratio and teacher education were not related to process quality. However, the use of a comprehensive education program and the implementation of professional development strategies were found to contribute importantly to process quality (Slot et al., 2013).

### ***Increasing the inclusiveness of ECEC***

A final note on what is really urgent. On the scale of society, ECEC will only contribute to significantly narrowing the education gap and produce the social and economic benefits associated with that, if the use of high quality provisions by low income and ethnic minority families is massively increased (Magnuson & Waldfogel, 2005). Research indicates that in many countries, including European countries, low income families and immigrant families have less access to (high quality) early childhood care and education provisions (Arnold & Doctoroff, 2003; Kuger & Kluczniok, 2008; Leu & Schell, 2009; LoCasale-Crouch et al., 2007; Magnuson & Shager, 2010; Sylva et al., 2007; Vandebroek et al., 2008).

For example, in the US, Phillips et al. (2000) found that day care centres and pre-schools with higher educated and better paid staff, with lower child-to-staff ratios and higher classroom quality had higher parental fees, thus making higher quality provisions less accessible for low income groups. Leu and Schell (2009) provide data on Germany, revealing that children who grow up with other languages than German tend to make less use of high quality ECEC and if they make use of ECEC tend to be in centers with few native German speaking children. Even when ECEC is available, accessible and affordable, use of ECEC shows social selection effects (Tang et al., 2012). In the UK, Sylva et al. (2007) found that parents with lower socioeconomic background preferred informal (relatives) daycare for children of lower quality, whereas parents with higher socioeconomic background chose more often for high quality professional daycare. Stipek et al. (1995) observed that, in the USA, low-income and ethnic minority children tend to be in pre-schools with a negative social-emotional climate and lower educated teachers. Other studies indicate that children in classrooms with higher proportions of ethnic minority children engage in less stimulating activities (Early et al., 2010; Tonyan & Howes, 2003). Likewise, drawing on another German sample of pre-schools, Kuger and Kluczniok (2008) showed that higher proportions of children with a native language other than German were associated with lower process quality regarding classroom emotional climate and promotion of literacy and numeracy.

The major factors explaining the selective access to ECEC are (1) types of funding; (2) the availability of ECEC provisions; (3) the costs relative to the income of the family; (4) admission criteria; (5) targeted policies; and (6) available alternatives for care. In addition, also (7) cultural factors play a role (Augustine et al., 2009; Döge & Keller, 2012; Early & Burchinal, 2001; Pungello & Kurtz-Costes, 1999; Rose & Ellicker, 2010). Even when ECEC is available, accessible and affordable, use of ECEC shows social selection effects (Tang et al., 2012). In particular the cultural childrearing beliefs of parents, their perceptions of quality and the degree of social and cultural integration, influence parents' choices and may cause differences between communities in ECEC participation. Cultural factors that are particularly important in this regard are: (1) the view that young children should be cared for by their mothers; (2) views on important socialization and education goals that do not match the pedagogy of ECEC; and (3) the lack of trust that parents put in professional provisions and their staff as representatives of the majority society.

Therefore, especially for the cultural reasons of not participating in ECEC, a continuous dialogue with all parents based on mutual respect, but especially with parents from lower socioeconomic classes and cultural minorities, is needed to construct a quality concept that receives

broad support and can lower participation thresholds in order to increase the inclusiveness of ECEC. Needless to say that such a dialogue is two-sided, reciprocal, and can also entail changing the perspectives of parents.

## To conclude

ECEC has become a sector of importance in Europe and is attributed a key role in creating more social equity and in strengthening Europe's capacity for innovation and economic competition. The expectations rise sky-high, so to say. To be able to meet these expectations, however, much more attention should be paid to the quality of ECEC. Given the diversity in cultural contexts within and between European countries, simple answers to the question what is high quality do not exist. Starting with evidence coming from carefully designed culture-sensitive research, it is important to engage in dialogues with all stakeholders to re-create a European quality concept. Such an endeavor requires creativity in redesigning curricula, in integrating playfulness with academics, in applying a child-centered pedagogy along with continuity in socialization practices between the centers and the families. Improving quality crucially depends on a number of conditions that should be fulfilled: improved teacher-education, an updated curriculum and professional development strategies that involve the team, the center and the system. Most importantly, and also to increase the inclusiveness of Europe's ECEC, we need to approach quality in a dialogic way to integrate parents' perspectives (see for example Duignan, 2005).

## References

- Adair, J. K., & Pastori, G. (2011): Developing qualitative coding frameworks for educational research: immigration, education and the Children Crossing Borders project. *International Journal of Research & Method in Education*, 34(1), 31-47
- Alvestead, M., & Duncan, J. (2006). "The value is enormous – It's priceless I think!" New Zealand preschool teachers' understandings of the early childhood curriculum in New Zealand: A comparative perspective. *International Journal of Early Childhood*, 38, 1.
- Arnold, D. H., & Doctoroff, G. L. (2003). The early education of socioeconomically disadvantaged children. *Annual Review of Psychology*, 54, 517-545.
- Augustine, J. M., Cavanagh, S. E., & Crosnoe, R. (2009). Maternal education, early child care and the reproduction of advantage, *Social Forces*, 88, 1-29.
- Barnett, W. S., Jung, K., Yarosz, D. J., Thomas, J., Hornbeck, A., Stechuk, R., & Burns, S. (2008). Educational effects of the Tools of the Mind curriculum: A randomized trial. *Early Childhood Research Quarterly*, 23(3), 299-313.
- Barnett, W. S., Yarosz, D. J., Thomas, J., Jung, K., & Blanco, D. (2007). *Two-way and monolingual English immersion in preschool education: An experimental comparison*. New Brunswick, New Jersey: National Institute for Early Education Research Rutgers University.
- Barros, S. & Aguiar, C. (2010). Assessing the quality of Portuguese child care programs for toddlers. *Early Childhood Research Quarterly*, 25, 527-535.
- Bauchmüller, R., Gørtz, M., & Rasmussen, A. W. (2011). *Long-run benefits from universal high-quality pre-schooling*. AKF Working Paper, 2011(2), AKF.
- Bennet, J. (2005). Curriculum issues in national policymaking. *European Early Childhood Education Research Journal*, 13, 5-23.
- Berk, L. E., Mann, T. D., & Ogan, A. T. (2006). Make-believe play: Wellspring for development of self-regulation. In D. G. Singer, R. M. Golinkoff, & K. Hirsh-Pasek (Eds.), *Play=learning: How play motivates and enhances children's cognitive and social-emotional growth* (pp. 74-100). New York: Oxford University Press.

- Berry, J. W., Phinney, J. S., Sam, D. L., & Vedder, P. (2006). Immigrant youth: Acculturation, identity, and adaption. *Applied Psychology, 55*(3), 303-332.
- Bialystok, E., & Barac, R. (2012). Emerging bilingualism: Dissociating advantages for metalinguistic awareness and executive control. *Cognition, 122*(1), 67–73.
- Bierman, K. L., Nix, R. L., Greenberg, M. T., Blair, C., & Domitrovich, C. E. (2008). Executive functioning and school readiness intervention: Impact, moderation, and mediation in the Head Start REDI program. *Development and Psychopathology, 20*, 821-843.
- Blair, C., & Diamond, A. (2008). Biological processes in prevention and intervention: The promotion of self-regulation as a means of preventing school failure. *Development and Psychopathology, 20*, 899-911.
- Blom, E., Küntay, A. C., Messer, M. H., Verhagen, J., & Leseman, P. P. M. (2013). *The benefits of being bilingual: Working memory advantages in cultural minority children in the Netherlands*. Utrecht, the Netherlands: Utrecht University, Department of Special Education. (manuscript submitted for publication)
- Bodrova, E. (2008). Make-believe play versus academic skills: A Vygotskian approach to today's dilemma of early childhood education. *European Early Childhood Education Research Journal, 16*(3), 357-369.
- Boeckaerts, M., & Corno, L. (2005). Self-regulation in the classroom: A perspective on assessment and intervention. *Applied Psychology: An International Review, 54*(2), 199-231.
- Bowers, E. P., & Vasilyeva, M. (2011). The relationship between teacher input and lexical growth of preschoolers. *Applied Psycholinguistics, 31*, 221-241.
- Bredenkamp, S. (1987). *Developmentally appropriate practice in early childhood programs serving children from birth through age eight*. Washington, DC: National Association for the Education of Young Children.
- Bull, R., Espy, K.A., & Wiebe, S.A. (2008). Short-term memory, working memory, and executive functioning in preschoolers: Longitudinal predictors of mathematical achievement at age 7 years. *Developmental Neuropsychology, 33*, 205-228.
- Burchinal, M., Howes, C., & Kontos, S. (2002). Structural predictors of child care quality in child care homes. *Early Childhood Research Quarterly, 17*, 87–105.
- Bus, A. G., Leseman, P. P. M., & Neuman, S. B. (2012). Methods for preventing early academic difficulties. In K.R. Harris, S. Graham & T. Urdan (Eds.), *APA Educational Psychology Handbook* (Volume 3; pp. 227-250). Washington, DC: American Psychological Association.
- Buyse, E., Verschueren, K., Doumen, S., Van Damme, J., & Maes, F. (2008). Classroom problem behavior and teacher-child relationships in kindergarten: The moderating role of classroom climate. *Journal of School Psychology, 46*(4), 367-391.
- Cadima, J., Leal, T., & Burchinal, M. (2010). The quality of teacher-student interactions: Associations with first graders' academic and behavioral outcomes. *Journal of School Psychology, 48*, 457-482.
- Carlson, S. M., & Meltzoff, A. N. (2008). Bilingual experience and executive functioning in young children. *Developmental Science, 11*, 282–298.
- Ceglowski, M. (2005). How stake holder groups define quality in child care. *Early Childhood Education Journal, 32*, No. 2.
- Citlak, B., Leyendecker, B., Schölmerich, A., Driessen, R., & Harwood, R. L. (2008). Socialization goals among first- and second-generation immigrant Turkish and German mothers. *International Journal of Behavioral Development, 32*(1), 56–65
- Clements, D. H., & Sarama, J. (2011). Early childhood mathematics intervention. *Science, 333*, 968-970.
- CoRe (2011). *Competence Requirements in Early Childhood Education and Care: Final Report*. Brussels: European Commission, Directorate-General for Education and Culture.
- Cost, Quality, & Child Outcomes Study Team (1995). *Cost, quality, and child outcomes in child care centers*. Denver, Colorado: Economics Department, University of Colorado at Denver.

- Cryer, D., Tietze, W., Burchinal, M., Leal, T., & Palacios, J. (1999). Predicting process quality from structural quality in preschool programs: A cross-country comparison. *Early Childhood Research Quarterly, 14*, 339-361.
- Dahlberg, G., Moss, P., & Pence, A. (2007). *Beyond quality in early childhood education and care: languages of evaluation*. London: Routledge.
- De Haan, A. K. E., Hoofs, H., Elbers, E., & Leseman, P. P. M. (2013). Effects of targeted versus mixed preschool and kindergarten on disadvantaged children's emergent academic skills: A cohort-sequential latent growth modeling approach. *School Effectiveness & School Improvement, 24*(2), 177-194.
- De Kruif, R. E. L., Riksen-Walraven, J. M., Gevers Deynoot-Schaub, M. J. J. M., Helmerhorst, K. O. W., Tavecchio, L. W. C., & Fukkink, R. G. (2009). *Pedagogogische kwaliteit van de opvang voor 0- tot 4-jarigen in Nederlandse kinderdagverblijven in 2008* [Educational quality of Dutch child care for 0- to 4- years-olds in 2008]. Amsterdam, Nijmegen: NCKO.
- Diamond, A., & Lee, K. (2011). Interventions shown to aid executive function development in children 4 to 12 years old. *Science, 333*(6045), 959-964.
- Diamond, A., Barnett, W. S., Thomas, J., & Munro, S. (2007). Preschool program improves cognitive control. *Science, 318* (30), 1387-1388.
- Dickinson, D. K. (2011). Teachers' language practices and academic outcomes of preschool children. *Science, 333*, 964-967.
- Dickinson, D. K., McGabe, A., Anastasopoulos, L., Peisner-Feinberg, E. S., & Poe, M. D. (2003). The Comprehensive Language Approach to early literacy: The interrelationships among vocabulary, phonological sensitivity, and print knowledge among pre-school aged children. *Journal of Educational Psychology, 95*(3), 465-481.
- Döge, P., & Keller, H. (2012). Child-rearing goals and conceptions of early childcare from adults' perspective in East and West Germany. *International Journal of Adolescence and Youth, 1*-13.
- Domitrovich, C. E., Cortes, R. C., & Greenberg, M. T. (2007). Improving young children's social and emotional competence: A randomized controlled trial of the preschool "PATHS" curriculum. *The Journal of Primary Prevention, 28*(2), 67-91.
- Domitrovich, C. E., Gest, S. D., Gill, S., Bierman, K. L., Welsh, J. A., & Jones, D. (2009). Fostering high-quality teaching with an enriched curriculum and professional development support: The Head Start REDI Program. *American Educational Research Journal, 46*, 567-597.
- Duignan, M. (2005): Talking about Quality: Report of a Consultation Process on Quality in Early Childhood Care and Education in Ireland. *Child Care in Practice, 11*(2), 211-230
- Dumas, C., & Lefranc, A. (2010). *Early schooling and later outcomes: Evidence from pre-school extension in France*. Thema Working Paper n°2010-07. Cergy Pontoise: Université de Cergy Pontoise.
- Durán, L. K., Roseth, C. J., & Hoffman, P. (2010). An experimental study comparing English-only and Transitional Bilingual Education on Spanish-speaking preschoolers' early literacy development. *Early Childhood Research Quarterly, 25*, 207-217.
- EACEA-Eurydice (2009). *Tackling social and cultural inequalities through early childhood education and care in Europe*. Brussels, EACEA-Eurydice.
- Early, D. M., & Burchinal, M. R. (2001). Early childhood care: Relations with family characteristics and preferred care characteristics. *Early Childhood Research Quarterly, 16*, 475-497.
- Early, D. M., Bryant, D., Pianta, R. C., Clifford, R. M., Burchinal, M., Ritchie, S., Barbarin, O. (2006). Are teachers' education, major, and credentials related to classroom quality and children's academic gains in pre-kindergarten? *Early Childhood Education Quarterly, 21*(2), 174-195.
- Early, D. M., Iruka, I. U., Ritchie, S., Barbarin, O. A., Winn, D. M. C., et al. (2010). How do pre-kindergartners spend their time? Gender, ethnicity, and income as predictors of experiences in pre-kindergarten classrooms. *Early Childhood Research Quarterly, 25*, 177-193.
- Early, D. M., Maxwell, K. L., Burchinal, M., Alva, S., et al. (2007). Teachers' education, classroom quality, and young children's academic skills: Results from seven studies of preschool programs. *Child Development, 78*(2), 558-580.

- Elias, C. L., & Berk, L. E. (2002). Self-regulation in young children: Is there a role for sociodramatic play? *Early Childhood Research Quarterly, 17*, 216-231.
- Engel de Abreu, P. M. J. E., Cruz-Santos, A., Tourinho, C. J., Martin, R., & Bialystok, E. (2012). Bilingualism enriches the poor enhanced cognitive control in low-income minority children. *Psychological Science, 23*(11), 1364–1371.
- Fang, Z., Schleppegrell, M. J., & Cox, B. M. (2006). Understanding the language demands of schooling: Nouns in academic registers. *Journal of Literacy Research, 38*(3), 247-273.
- Fantuzzo, J. W., Gadsden, V. L., & McDermott, P. A. (2011). An integrated curriculum to improve mathematics, language, and literacy for Head Start children. *American Educational Research Journal, 48*, 763-793.
- Fenech, M. (2011). An Analysis of the Conceptualisation of "Quality" in Early Childhood Education and Care Empirical Research: Promoting "Blind Spots" as Foci for Future Research. *Contemporary Issues in Early Childhood, 12*(2), 102-117.
- Fukkink, R. G., & Lont, A. (2007). Does training matter? A meta-analysis and review of caregiver training studies. *Early Childhood Research Quarterly, 22*, 294-311.
- Goelman, H., Forer, B., Kershaw, P., Doherty, G., Lero, D., & LaGrange, A. (2006). Towards a predictive model of quality in Canadian child care centers. *Early Childhood Research Quarterly, 21*, 280-295.
- Greenfield, D. B., Jirout, J., Dominquez, X., Greenberg, A., Maier, M., & Fuccilo, J. (2009). Science in the preschool classroom: A programmatic research agenda to improve science readiness. *Early Education & Development, 20*, 238-264.
- Greenfield, P. M., Keller, H., Fuligni, A., & Maynard, A. (2003). Cultural pathways through universal development. *Annual Review of Psychology, 54*, 461-490.
- Hamre, B. K., & Pianta, R. C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development, 72*, 625-638.
- Harkness, S., Super, C. M., & Van Tijen, N. (2000). Individualism and the 'Western mind' reconsidered: American and Dutch parents' ethnotheories of the child. In S. Harkness, C. Raeff, & C. M. Super (Eds.), *Variability in the social-construction of the child* (pp. 23-39). *New Directions for Child and Adolescent Development, 87*, 1-115.
- Havnes, T., & Mogstad, M. (2011a) No child left behind: Subsidized child care and children's long run outcomes. *American Economic Journal: Economic Policy*.
- Hewett, V. M. (2001). Examining the Reggio Emilia approach to early childhood education. *Early Childhood Education Journal, 29*, 95-100.
- Howes, C., & Smith, E. W. (1995). Relations among child care quality, teacher behavior, children's play activities, emotional security and cognitive activity in child care, *Early Childhood Research Quarterly, 10*, 381-404.
- Howes, C., Burchinal, M., Pianta, R., Bryant., D., Early, D., Clifford, R., & Barbarin, O. (2008). Ready to learn? Children's pre-academic achievement in pre-Kindergarten programs. *Early Childhood Research Quarterly, 23*, 27-50.
- Howes, C., Pianta, R., Bryant, D., Hamre, B., Downer, J., & Soliday-Hong, S. (2008). *Ensuring effective teaching in early childhood education through linked professional development systems, quality rating systems and state competencies: The role of research in an evidence-driven system*. Washington DC: National Center for Research in Early Childhood Education (White Paper).
- Jordan, N. C., & Levine, S. C. (2009). Socioeconomic variation, number competence, and mathematics learning difficulties in young children. *Developmental Disabilities Research Reviews, 15*, 60-68.
- Justice, L. M., Mashburn, A., Pence, K. L., & Wiggins, A. (2008). Experimental evaluation of a preschool language curriculum: Influence on children's expressive language skills. *Journal of Speech, Language, and Hearing Research, 51*, 983-1001.
- Kağitçıbaşı, Ç., & Ataca, B. (2005). Value of children and family change: A three decade portrait from Turkey. *Applied Psychology: International Review, 54*, 317–337.

- Kamerman, S. B. (2006). A global history of early childhood education and care. Background paper for the Education for all global monitoring report 2007: strong foundations: early childhood care and education. <http://unesdoc.unesco.org/images/0014/001474/147470e.pdf>
- Kayili, G., & Ari, R. (2011). Examination of the effects of the Montessori method on preschool children's readiness to primary education. *Educational Sciences: Theory & Practice*, *11*, 2104-2109.
- Keller, H., Lamm, B., Abels, M., et al. (2006). Cultural models, socialization goals, and parenting ethnotheories. *Journal of Cross-Cultural Psychology*, *37*(2), 155-172.
- Klibanoff, R. S., Levine, S. C., Huttenlocher, J., Vasilyeva, M., & Hedges, L. V. (2006). Preschool children's mathematical knowledge: The effect of teacher "math talk". *Developmental Psychology*, *42*, 59-69.
- Kochanska, G., Murray, K. T., & Harlan, E. T. (2000). Effortful control in early childhood: Continuity and change, antecedents, and implications for social development. *Developmental Psychology*, *36*(2), 220-232.
- Kovelman, I., Baker, S.A., & Petitto, L.-A. (2008). Age of first bilingual language exposure as a new window into bilingual reading development. *Bilingualism: Language and Cognition*, *11*(2), 203-223.
- Kuger, S., & Klucznik, K. (2008). Prozessqualität im Kindergarten. Konzept, Umsetzung und Befunde. *Zeitschrift für Erziehungswissenschaft, Sonderheft 11*, 159-178.
- Lambert, R. G., O'Donnell, M., & Abbott-Shim, M. (2008). *Evaluation of the effects of Creative Curriculum on classroom quality and child outcomes*. Charlotte, NC: The Center for Educational Measurement and Evaluation.
- Landry, S. H., Swank, P. R., Smith, K. E., Assel, M. A., & Gunnewig, S. B. (2006). Enhancing early literacy skills for preschool children: Bringing a professional development model to scale. *Journal of Learning Disabilities*, *39*, 306-324.
- Layzer, J. I., & Goodson, B. D. (2006). The "quality" of early care and education settings: definitional and measurement issues. *Evaluation Review*, *30*, 556-576.
- Leach, P., Barnes, J., Malmberg, L.-E., Sylva, K., Stein, A., & the FCCC team (2008). The quality of different types of child care at 10 and 18 months: a comparison between types and factors related to quality. *Early Child Development and Care*, *178*, 177-209.
- Lerkanen, M.-K., Kiuru, N., Pakarinen, E., Viljaranta, J., Poikkeus, A.-M., Rasku-Puttonen, H., Siekkinen, M., & Nurmi, J. E. (2012). The role of teaching practices in the development of children's interest in reading and math in kindergarten. *Contemporary Educational Psychology*, *37*(4), 266-279.
- Leseman, P. P. M. & Van Tuijl, C. (2006). Cultural diversity in early literacy. In S.B. Neuman & D.K. Dickinson, (Eds.), *Handbook of early literacy research. Volume 2* (pp. 211-228). New York: The Guilford Press.
- Leseman, P. P. M., & Van Tuijl, C. (2001). Home support for bilingual development of Turkish 4-6-year-old immigrant children in the Netherlands: Efficacy of a home-based educational program. *Journal of Multilingual and Multicultural Development*, *21*(4), 309-324.
- Leseman, P. P. M., Rollenberg, L., & Rispen, J. (2001). Playing and working in kindergarten: Cognitive co-construction in different educational situations. *Early Childhood Research Quarterly*, *16*, 3, 363-384.
- Leseman, P.P.M. & Van Tuijl, C. (2006). Cultural diversity in early literacy. In S.B. Neuman & D.K. Dickinson, (Eds.), *Handbook of early literacy research. Volume 2* (pp. 211-228). New York: The Guilford Press.
- Leu, H. R., & Schell, R. (2009). Between education and care? Critical reflections on early childhood policies in Germany. *Early Years: An International Research Journal*, *29*, 5-18.
- Lillard, A. S. (2012). Preschool children's development in classic Montessori supplemented Montessori, and conventional programs. *Journal of School Psychology*, *50*, 379-401.
- Lillard, A. S., Lerner, M. D., Hopkins, E. J., Dore, R. A., Smith, E. D., & Palmquist, C. M. (2012). The impact of pretend play on children's development: A review of the evidence. *Psychological Bulletin*. (online)
- Lillard, A., & Else-Quest, N. (2006). Evaluating Montessori education. *Science*, *313*, 1893-1894.



- LoCasale-Crouch, J., Konold, T., Pianta, R., Howes, C., Burchinal, M., Bryant, D., Clifford, R., Early, D., & Barbarin, O. (2007). Observed classroom quality profiles in state-funded pre-kindergarten programs and associations with teacher, program, and classroom characteristics. *Early Childhood Research Quarterly, 22*, 3-17.
- Lonigan, C. J., Farver, J. M., Philips, B. M., & Clany-Menchetti, J. (2011). Promoting the development of preschool children's emergent literacy skill: a randomized evaluation of a literacy-focused curriculum and two professional development models. *Reading and Writing, 24*, 305-337.
- Love, J. M., Harrison, L., Sagi-Schwartz, A., van IJzendoorn, M.H., Ross, C., Ungerer, J. A., et al. (2003). Child care quality matters: How conclusions may vary with context, *Child Development, 74*, 1021-1033.
- Magnuson, K. A., & Waldfogel, J. (2005). Early childhood care and education: Effects on ethnic and racial gaps in school readiness. *The Future of Children, 15*(1), 169-196.
- Magnuson, K., & Shager, H. (2010). Early education: Progress and promise for children from low-income families, *Children and Youth Services Review, 32*, 1186-1198.
- Mantovani, S. (2001). Infant-toddler centers in Italy today: Tradition and innovation. In L. Gandini & C. Pope Edwards (Eds.), *Bambini: The Italian approach to infant/toddler care* (pp. 23-37). New York: Teachers College Press.
- Marcon, R. A. (1999). Differential impact of preschool models on development and early learning of inner-city children: A three cohort study. *Developmental Psychology, 35*(2), 358-375.
- Marcon, R. A. (2002). Moving up the grades: Relationship between preschool model and later school success. *Early Childhood Research & Practice, 4*(1), 1-24.
- Mashburn, A. J., Pianta, R. C., Hamre, B. K., Downer, J. T., Barbarin, O. A., Bryant, D., Burchinal, M., Early, D. M., & Howes C. (2008). Measures of classroom quality in prekindergarten and children's development of academic, language, and social skills. *Child Development, 79*, 732-749.
- McClelland, M. M., Acock, A. C., & Morrison, F. J. (2006). The impact of kindergarten learning-related skills on academic trajectories at the end of elementary school. *Early Childhood Research Quarterly, 21*, 471-490.
- McClelland, M. M., Cameron, C. E., Connor, C. M., Farris, C., Jewkes, A., & Morrison, F. (2007). Links between behavioral regulation and preschoolers' literacy, vocabulary, and math skills. *Developmental Psychology, 43*, 947-959.
- McMullen, M., Elicker, J., Wang, J., et al. (2005). Comparing beliefs about appropriate practice among early childhood education and care professionals from the U.S., China, Taiwan, Korea and Turkey. *Early Childhood Research Quarterly, 20*, 451-464.
- Melhuish, E. C. (2004). *Child Benefits: The importance of investing in quality childcare*. London: Daycare Trust.
- Melhuish, E. C. (2011). Preschool matters. *Science, 333*, 299-300.
- Mercer, N. & Littleton, K. (2007). *Dialogue and the development of children's thinking: a socio-cultural approach*. London: Routledge.
- Mercer, N. (2010). The analysis of classroom talk: Methods and methodologies. *British Journal of Educational Psychology, 80*(1), 1-14.
- Moin, V., Schwartz, M., & Breitkopf, A. (2011). Balancing between heritage and host language in bilingual kindergarten: Viewpoints of Russian-speaking immigrant parents in Germany and Israel. *European Early Childhood Education Research Journal, 19*(4), 515-533.
- Montie, J. E., Xiang, Z., & Schweinhart, L. J. (2006). Preschool experience in 10 countries: Cognitive and language performance at age 7. *Early Childhood Research Quarterly, 21*, 313-331.
- Musatti, T., & Picchio, M. (2010). Early education in Italy: Research and practice. *International Journal of Early Childhood, 42*, 141-153.
- Nesturuk, O. (2010). Heritage language maintenance and loss among children of Eastern European immigrants in the USA. *Journal of Multilingual and Multicultural Development, 31*(3), 271-286.
- NICHD Early Child Care Research Network (2006). Child-care effect sizes for the NICHD study of early child care and youth development. *American Psychologist, 61*(2), 99-116.

- Nourot, P. M. (2005). Historical perspectives on early childhood education. In J. L. Roopnarine & J. E. Johnson (Eds.), *Approaches to early childhood education* (Fourth edition; pp. 3-43). Upper Saddle River, New Jersey: Pearson Merrill Prentice Hall.
- Oberhuemer, P. (2005). International perspectives on early childhood curricula. *International Journal of Early Childhood*, 37(1), 27-37.
- Oberhuemer, P. (2011). The early childhood workforce in Europe between divergencies and emergencies? *International Journal of Child Care and Education Policy*, 5(1), 55-63.
- OECD (2006). *Starting Strong II: Early Childhood Education and Care*. Paris: OECD.
- Pels, T., & de Haan, M. (2006). Socialization practices of Moroccan families after migration: A reconstruction in an 'acculturative arena'. *Young*, 15, 69-87.
- Pessanha, M., Aguiar, C., & Bairrao, J. (2007). Influence of structural features on Portuguese toddler child care quality. *Early Childhood Research Quarterly*, 22, 204-214.
- Philips, D. A., & Lowenstein, A. E. (2011). Early care, education, and child development. *Annual Review of Psychology*, 62, 483-500.
- Phillips, D., Mekos, D., Scarr, S., McCartney, K., & Abott-Shim, M. (2000). Within and beyond the classroom door: Assessing quality in child care centers. *Early Childhood Research Quarterly*, 15(4), 475-496.
- Pianta, R., Howes, C., Burchinal, M., Bryant, D., Clifford, R. Early, D., & Barbarin, O. (2005). Features of Pre-Kindergarten programs, classrooms, and teachers: Do they predict observed classroom quality and child-teacher interactions? *Applied Developmental Science*, 9, 144-159.
- Piasta, S. B., Justice, L. M., Cabell, S. Q., Wiggins, A. K., Turnbull, K. P., & Curenton, S. M. (2012). Impact of professional development on preschool teachers' conversational responsivity and children's linguistic productivity and complexity. *Early Childhood Education Quarterly*, 27, 387-400.
- Place, S., & Hoff, E. (2011). Properties of dual language exposure that influence 2-year-old's bilingual proficiency. *Child Development*, 82(6), 1834-1849.
- Pramling Samuelsson, I. & Fler, M. (Eds.) (2009). *Play and learning in early childhood settings: International perspectives, Vol. 1*. New York: Springer.
- Pramling, N. & Pramling Samuelsson, I. (Eds.). (2011). *Educational encounters: Nordic Studies in Early Childhood Didactics*. Dordrecht, Netherlands: Springer.
- Pungello, E. P., & Kurtz-Costes, B. (1999). Why and how working women choose child care: A review with a focus on infancy. *Developmental Review*, 19, 31-96.
- Rasku-Puttonen, H., Lerkkanen, M.-K., Poikkeus, A.-M., & Siekkinen, M. (2012). Teacher-child interactions and dialogical patterns in high quality kindergarten classroom. *International Journal of Educational Research*. (online)
- Rentzou, K., & Sakellariou, M. (2011). The quality of early childhood educators: Children's interaction in Greek child care centers. *Early Childhood Education Journal*, 38, 367-376.
- Rhodes, S., & Hennessy, E. (2001). The effects of specialized training on caregivers and children in early-years settings: An evaluation of the Foundation Course in playgroup practice. *Early Childhood Research Quarterly*, 15, 559-576.
- Rimm-Kaufman, S. E., Curby, T. W., Grimm, K. J. Nathanson, L., & Brock, L. L. (2009). The contribution of children's self-regulation and classroom quality to children's adaptive behaviors in the kindergarten classroom. *Developmental Psychology*, 45(4), 958-972.
- Rose, K. K., & Elicker, J. (2010). Maternal child care preferences for infants, toddlers, and preschoolers: The disconnect between policy and preference in the USA. *Community, Work & Family*, 13(2), 205-229.
- Rosenthal, M. (2003). Quality in early childhood and care: A cultural context. *European Early Childhood Education Research Journal*, 11(2), 101-116.
- Scheele, A. F., Leseman, P. P. M., & Mayo, A. Y. (2010). The home language environment of mono- and bilingual children and their language proficiency. *Applied Psycholinguistics*, 31, 117-140.
- Scheele, A. F., Leseman, P. P. M., Mayo, A. Y., & Elbers, E. (2012). Relations of home language and literacy with three-year-old's emergent academic language in narrative and instruction genres. *The Elementary School Journal*, 112(3), 419-444.

- Schweinhart, L. J., & Weikart, D. P. (1997). The High/Scope preschool curriculum study through age 23. *Early Childhood Research Quarterly, 12*(2), 117-143.
- Sénéchal, M., Pagan, S., Lever, R., & Ouelette, G. P. (2008). Relations among the frequency of shared reading and 4-year-old children's vocabulary, morphological and syntax comprehension, and narrative skills. *Early Education and Development, 19*(1), 27-44.
- Sheridan, S., & Schuster, K. M. (2001). Evaluation of pedagogical quality in early childhood education: A cross-national perspective. *Journal of Research in Childhood Education, 16*, 109-124.
- Slot, P. L., Leseman, P. P. M., Verhagen, J., & Mulder, H. (2013). *Associations between structural quality and process quality in Dutch early childhood education and care*. Utrecht: Department of Education, Utrecht University. (manuscript submitted for publication)
- Snow, C.E. (2010). Academic language and the challenge of reading for learning about science. *Science, 328*, 450-452.
- Spiess, C. K., Büchel, F., & Wagner, G. G. (2003). Children's school placement in Germany: does kindergarten attendance matter? *Early Childhood Research Quarterly, 18*, 255-270.
- St. Clair-Thompson, H. L., & Gathercole, S. E. (2006). Executive functions and achievements in school: Shifting, updating, inhibition, and working memory. *The Quarterly Journal of Experimental Psychology, 59*(4), 745-759.
- Stipek, D. J., Feiler, R., Daniels, D., & Milburn, S. (1995). Effects of different instructional approaches on young children's achievement and motivation. *Child Development, 66*, 209-223.
- Suizzo, A. M. (2003). French parents' cultural models and childrearing beliefs. *International Journal of Behavioral Development, 26*, 297-310.
- Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I., & Taggart, B. (2010). *Early Childhood Matters*. London: Routledge.
- Sylva, K., Stein, A., Leach, P., Barnes, J., & Malmberg, L.-E. (2007). Family and child factors related to the use of non-maternal infant care: An English study. *Early Childhood Research Quarterly, 22*, 118-136.
- Sylva, K., Taggart, B., Siraj-Blatchford, I., Totsika, V., Ereky-Stevens, K., Gilden, R., & Bell, D. (2007). Curricular quality and day-to-day learning activities in pre-school. *International Journal of Early Years Education, 15*, 49-65.
- Szecsi, T., & Szilagyi, J. (2012). Immigrant Hungarian families' perceptions of new media technologies in the transmission of heritage language and culture. *Language, Culture and Curriculum, 25*(3), 265-281.
- Tang, S., Coley, R. L., & Votruba-Drzal, E. (2012). Low-income families' selection of child care for their young children. *Children and Youth Services Review, 34*, 2002-2011.
- Thomason, A. C., & La Paro, K. M. (2009). Measuring the quality of teacher-child interactions in toddler child care. *Early Education & Development, 20*, 285-304.
- Tobin, J. (2005). Quality in early childhood education: An anthropologist's perspective. *Early Education & Development, 16*, 421-434.
- Tobin, J. J., Mantovani, S., & Bove, C. (2010). Methodological Issues in video based research on immigrant children and parents in early childhood settings. In M. Tarozzi & L. Mortari (Eds.), *Phenomenology and Human Research Today* (pp. 204-225). Zeta Books.
- Tobin, J., & Kurban, F. (2010). Preschool practitioners' and immigrant parents' beliefs about academics and play in the early childhood education curriculum in five countries. *Orbis Scolae, 4*(2), 75-87.
- Tonyan, H. A., & Howes, C. (2003). Exploring patterns in time children spend in a variety of child care activities: associations with environmental quality, ethnicity, and gender. *Early Childhood Research Quarterly, 18*, 121-142.
- Tudge, J. R. H., Otero, D. A., Hogan, D. M., & Etz, K. E. (2003). Relations between the everyday activities of preschoolers and their teachers' perceptions of their competence in the first years of school. *Early Childhood Research Quarterly, 18*, 42-64.

- Tulviste, T., Mizera, L., & De Geer, B. (2012). Socialization Values in Stable and Changing Societies : A Comparative Study of Estonian, Swedish, and Russian Estonian Mothers. *Journal of Cross-Cultural Psychology*, 43, 480-497.
- Ucelli, P., & Páez, M. M. (2007). Narrative and vocabulary development of bilingual children from kindergarten to first grade: Developmental changes and associations among English and Spanish skills. *Language, Speech, and Hearing Services in Schools*, 38, 225-236.
- Unsworth, S., Argyri, F., Cornips, L., Sorace, A., & Tsimpli, I. (2011). On the role of age of onset and input in early child bilingualism in Greek and Dutch. In M. Pirvulescu et al. (Eds.), *Selected Proceedings of the 4th Conference on Generative Approaches to Language Acquisition* (pp. 249-265). Somerville, MA: Cascadilla Proceedings Project.
- Van der Ven, S. H. G., Kroesbergen, E. K., Boom, J., & Leseman, P. P. M. (2011). The development of executive functions and early mathematics: A dynamic relationship. *British Journal of Educational Psychology*, 82(1), 100-119.
- Vandell, D. L., Belsky, J., Burchinal, M., Steinberg, L., & Vandergrift, N. (2010). Do Effects of Early Child Care Extend to Age 15 Years? Results From the NICHD Study of Early Child Care and Youth Development. *Child Development*, 81(3), 737-756.
- Vandenbroeck, M., De Visscher, S., Van Nuffel, K., & Ferla, J. (2008). Mothers' search for infant child care: The dynamic relationship between availability and desirability in a continental European welfare state. *Early Childhood Research Quarterly*, 23, 245-258.
- Weizman, Z. O., & Snow, C. E. (2001). Lexical input as related to children's vocabulary acquisition: Effects of sophisticated exposure and support for meaning. *Developmental Psychology*, 37(2), 265-279.
- Winsler, A., Díaz, R. M., Espinosa, L., & Rodríguez, J. (1999). When learning a second language does not mean losing the first: Bilingual language development of low-income, Spanish-speaking children attending bilingual preschool. *Child Development*, 70(2), 349-362.
- Yağmur, K. (2004). Language maintenance patterns of Turkish immigrant communities in Australia and Western Europe: The impact of majority attitudes on ethnolinguistic vitality perceptions. *International Journal of the Sociology of Language*, 165, 121-142.
- Zaslow, M., Anderson, R., Redd, Z., Wessel, J., Tarullo, L., & Burchinal, M. (2010). *Quality Dosage, Thresholds, and Features in Early Childhood Settings: A Review of the Literature*, OPRE 2011-5. Washington, DC: U.S. Department of Health and Human Services.