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**LITERATURE OVERVIEW FOR THE 7th MEETING OF THE NETWORK ON EARLY
CHILDHOOD EDUCATION AND CARE**

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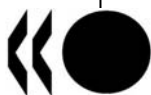


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INTRODUCTION

Background

1. This paper is part of the OECD Education and Training Policy Division (ETP) project 'Encouraging quality in Early Childhood Education and Care (ECEC)' and contributes to the knowledge base supporting the project. The project aims to encourage debate and dialogue about quality in ECEC; to stimulate further thinking and action at policy level about the best ways to care for, educate and develop young children; and to explore how countries can put in place policies to encourage quality and improve children's early development.

Purpose

2. The aim of this paper is to explore and describe what factors positively influence child outcomes within Early Childhood Education and Care. Based upon the research evidence, the focus of the 'Encouraging quality in ECEC' is narrowed down to the three following topics: parental and community involvement; curriculum and pedagogy; and professional development and work conditions. A rationale for this focus, and a more extensive research overview on the three topics, can be found in this paper.

3. For the purpose of this overview and the quality project, the definition of ECEC is, in co-ordination with the Starting Strong reports, defined as all arrangements providing care and education for children under compulsory school age, regardless of setting, funding, opening hours, or programme content (OECD, 2001).

Methodology

4. The literature depicted has been derived from four main sources: the Starting Strong reports; empirical research literature which is primarily from the United States and focuses largely on individual programmes; policy analysis literature; and other research and policy documents relevant to quality issues and early child outcomes, much of which comes from Western European countries. The literature was searched through bibliographic databases and through 'snow-balling' of references.

5. A search for material published in education, psychology, public policy, neuroscience, early childhood education, child care, economics and family databases was undertaken as the research base for this paper. We have attempted to only include studies that meet the following criteria: having research methods, analysis, findings sufficiently detailed to provide a sound basis for judgement about the robustness of the conclusions, and information about the characteristics of the context. The evidence depicts linkages between ECEC characteristics, quality and child outcomes.

Limitations

6. This paper does not intend to provide a comprehensive overview of *all* existing research findings, since it is not possible to include all studies worldwide into one overview. Most research on ECEC services has been conducted on ECEC services for preschool-age children. While research has been done on ECEC services for infants and toddlers, the body of evidence for these programmes is less exhaustive and less conclusive, although both fields of research have been addressed in this paper. Additionally, most research evidence focuses on child-centred care and education. Research on home-based ECEC provision is far less extensive and is, therefore, under-represented in this overview.

CHILD DEVELOPMENT AND QUALITY IN ECEC

Purpose

7. This section covers literature on ideas, research, policy and practice concerning quality in ECEC. The overall objectives of this section are three-fold:

- Offer insights into conceptions of (high) quality within ECEC
- Identify the key indicators that improve child outcomes
- Select the focus areas of the project, based upon the research evidence and countries' policy needs

Early child development

8. The interest in early child development has increased with a growing body of neurobiological, behavioural and psychological studies which have facilitated better understanding of the conditions that influence child development. These studies have developed a greater understanding of the importance of early childhood experiences and the influence of genetics, environment and early relationships on the cognitive, socio-emotional and behavioural development.

9. Neurological research has indicated that brain and behaviour development occurs during the first years of life, and that this is 'a function of the quality and range of early experiences and interactions'. Depending on the nature of these experiences, children will have strong or weak foundations for their future development. Although the brain continues to develop throughout life, new learning does not occur at the same speed as it does during the early years (Harrison and Ungerer, 2005; Ridley, 2003; Herschkowitz et al., 2002; Peisner-Feinberg et al., 2000; Shonkoff and Philips, 2000; National Institute of Child Health and Development NICHD, 1997).

The home environment

10. Children spend the larger, if not the largest, part of their young life in their direct home environment, interacting with their parents¹, siblings and other family members. Families living in different socio-economic classes because of parental education, income and occupation have different capacities to provide their children with a nutritious and healthy lifestyle, provide for quality child care and invest in other learning resources – e.g. books and visits to libraries and museums (Bradley et al., 1989). Family's socio-economic status (SES) is therefore powerfully associated with children's educational development, and the effects are particularly strong for children in lower socio-economic ranges (Duncan et al., 1998).

11. In addition to genetic predisposition, research shows that family resources are found to highly impact SES. An illustration of the role of family SES is provided by a study of children adopted between the age of four and six into families that vary widely in SES (Duyme et al., 1999). Adopted children clearly do not have any genetic links with their adoptive parents. A study on the IQ of these children addresses the issue of to what extent non-genetic SES factors can impact the cognitive development of a child. The IQ of these children was measured before adoption, and all children, whether adopted by low- or high-SES families, had higher IQ's after adoption. Interestingly, children adopted by higher-SES families had significantly larger gains in IQ than children adopted in lower-SES families because they were raised in richer, more stimulating environments.

¹ For the purpose of this paper the term 'parents' refers to all carers holding prime responsibility for the upbringing and care of a child.

12. Another way in which families' economic resources may shape children's development is through their impact on parents' mental health. Edin and Lein (1997) show that in poor families, child care and medical care arrangements are unstable or of low quality. Additionally, their economic hardship often results in chronic stress. This is more prevalent among low-income populations because they experience more negative events and have fewer resources to adverse the negative events (McLeod and Kessler, 1990; Shonkoff and Philips, 2000). The connection between economic status and mental health is important because poor mental health is related to harsh, inconsistent, less involved parenting and less caring interactions. In turn, this has been associated with behavioural problems – e.g. children are more often involved in fights and less capable of collaborating with peers; and it can cause severe attention issues leading to decreasing school performance (Shonkoff and Philips, 2000).

The need for high quality ECEC

13. When out-of-home and after-school care became more popular during the 1970s and 1980s, researchers started to conduct analyses on the effects of mother-child separations on mother-child attachment. There was a common ideology that a continuing separation of mother and child would have negative effects on the child's development because the mother would be less able to secure attachments with her child. But due to the complexity of different care environments and the many variables involved in attachment relationships, findings about the impact of child care on child development have been inconsistent for a long time (Elliott, 2006). However, more recent evaluations on this topic have found no significant relationship between attendance in ECEC services and attachment security (NICHD, 1997; Harrison and Ungerer, 2002; Ahnert et al., 2004). Ahnert's (2004) study concluded that a high quality level in child care appears to act as a buffer *against* insecure attachments for children instead of endangering attachment security.

14. These studies contributed to an increased understanding of the relevance of and need for high quality ECEC to preserve positive attachment relations and interactions which are found to be essential for child well-being and development (Peisner-Feinberg et al., 2000; Shonkoff and Philips, 2000). Due to this development, there now is a considerable amount of research on the characteristics, correlations, indicators and assessments of quality. One of the main findings of the extensive research work is that quality matters. It has been found in many programme evaluations and quality measurements that ECEC programmes can have a positive effect on children's developmental outcomes if the quality of the service is high (Burchinal et al., 1996; OECD, 2001; 2006; Shonkoff and Philips, 2000; Sammons et al., 2002). These studies accentuated the relation between positive development outcomes and the quality of early care and education programmes and contributed to defining the relevant characteristics of quality ECEC.

Definitions and concepts about quality in Early Childhood Education and Care

15. There have been numerous studies investigating quality as a construct and quality as an outcome, and many studies have examined quality issues and the interdependence between these issues. However, ideas about quality vary between countries and sometimes regions. Notions on quality differ depending on beliefs, values, a country's (region's) socio-economic context, and the needs of the community of users (Balaguer, 2004). Perspectives on quality vary with the stakeholder; hence, ideas about quality differ among parents, policy makers and ECEC staff members.

16. Additionally, the European Commission pointed out that 'governments change, and that quality ECEC is not static'. Defining quality in ECEC is a dynamic and continuous process, which requires regular reflection and revision. While there are various, changing notions and conceptions of quality, some common components can be found in almost any present-day definition or idea of quality. Most conceptions of quality ECEC are characterized by assessing quality features at process level and at structural level (Philips and Howes, 1987; Cryer, 1999; Huntsman, 2008).

Quality at process level

17. Process quality consists of what children actually experience in their programmes – that which happens within a setting. These experiences are thought to have an influence on children’s well-being and development (Whitebook et al., 1990; Peisner-Feinberg et al., 2000; Shonkoff and Philips, 2000).

Quality at structural level

18. Structural quality consists of ‘inputs to process-characteristics which create the framework for the processes that children experience’ (Cryer, 1999). These characteristics are not only part of the ECEC location in which children participate, but they are part of the environment that surrounds the ECEC setting, e.g. the community. They are often aspects of ECEC that can be regulated, though they may contain variables which cannot be regulated at state level.

Quality as child outcomes

19. Of interest to policy makers are the elements that have positive effects on children’s developmental outcomes on the short- and long-term (Elliott, 2006; Friendly et al., 2006). Within the scope of child outcomes, a holistic approach has been adopted since all development domains are relevant for children’s growth and societal development in general. The outcomes include cognitive and linguistic outcomes but also social, emotional, and physical/health developmental outcomes (Cost Quality and Child Outcomes CQCO study team, 1995; Friendly et al., 2006; Huntsman, 2008).

20. In line with this holistic child development approach, high quality ECEC includes those factors of process and structural quality that stimulate, encourage and increase child outcomes in one or more of the development domains.

Factors that contribute to improving child outcomes

21. This section highlights links between effects of ECEC on children’s progress and outcomes and the quality of ECEC programs, and they help define the characteristics of high quality ECEC. The focus is on those factors that impact child outcomes driven by evidence.

22. Probably the most well-known studies on aspects of quality in ECEC have been evaluations of North-American early learning and development programmes like Head Start², early Head Start³, the Chicago Child-Parent Centre Program⁴ and the Carolina Abecedarian Project⁵. Other important ‘quality’ focused studies are the National Institute of Child Health and Human Development Study (NICHD) and

² The Head Start Program is a program of the United States Department of Health and Human Services that provides comprehensive education, health, nutrition, and parent involvement services to low-income children and their families.

³ Early Head Start evolved out of the Head Start Program. It is a federally funded community-based program for low-income families with infants and toddlers and pregnant women.

⁴ The Chicago Child-Parent Centred program is a state- and federally funded early childhood educational intervention for children in the Chicago Public Schools who are at risk of academic underachievement due to poverty and associated factors.

⁵ The Abecedarian project is a carefully controlled scientific study of the potential benefits of early childhood education for poor children who received full-time, high-quality educational intervention in a childcare setting from infancy through age 5. Children's progress was monitored over time with follow-up studies conducted at ages 12, 15, and 21.

the Effective Provision of Preschool Education (EPPE⁶) project from the United Kingdom. Other relevant research and policy documents related to quality issues from other parts of the world have, when suitable, been included in this section as well.

Quality at process level affecting child outcomes

23. The NICHD study (2002) found that process quality has been positively related to children's performances on measures of cognitive and linguistic abilities at ages 3, 15, and 24 years, and is related to children's pre-academic skills of expressive and receptive language at age three (NICHD, 2002). Earlier research of the NICHD (1998) found evidence that higher process quality predicted fewer mother-and caregiver-reported problems such as aggressive behaviour towards adults and peers.

Pedagogy and Curriculum

24. Healthy early development and, in particular, school readiness are dependent on how young children think and feel. Central to this are nurturing and consistent relationships. The quality of their care and education interactions is an especially clear indicator influencing child development. Longitudinal studies suggest that early interactions and experiences set the stage for other relationships, as children move beyond the immediate and direct environments of the home or centre (Thompson, 1999; Shonkoff and Philips, 2000). Positive relationships have the most consistent and enduring influence on young children's social and emotional development (Shonkoff and Philips 2000).

25. Effective programmes that influence child outcomes positively, such as Head Start and Early Head Start, emphasize interactions with parents, staff⁷ and peers (Love et al., 2003) and improve cognitive and language outcomes, health and social development (Elliott, 2006). An appropriate pedagogy and curricular framework is a key element in providing warm interactions and can stimulate positive relationships not only between the staff members and children but also with parents and peers (Shonkoff and Philips, 2000; Kagan and Kauerz, 2006).

26. Children's cognitive, linguistic and social development is enhanced when the curriculum and pedagogy approach recognizes that interactions play an important role in child outcomes (Bowman et al., 2001). At the heart of appropriate pedagogies is the ability of practitioners to structure environments and plan activities that promote optimum engagement for children. The effects of poor quality pedagogical experiences has been found to impact children's literacy and mathematics competency at age 12 in New Zealand (Wylie, 2004).

27. Stability of care and relationships is also highly important in fostering child development. Strongly associated with stable, sensitive and stimulating interactions are the teacher or caregiver's education and training, and the context and conditions in which the staff member works, including ratios, group size and remunerations (salary and benefits) (Lamb, 1998; Shonkoff and Philips, 2000). High quality programmes have highly qualified staff, which contributes strongly to positive and stable staff-child interactions (National Research Council and Institute of Medicine, 2000). Providers with low staff turnover rates engage in more appropriate and attentive interactions with children (Raikes, 1993).

⁶ EPPE is a longitudinal research study that followed the developmental progress of more than 3,000 children across England between 1997 and 2003. The developmental status of children was measured over the years between ages of three and six years old.

⁷ Staff: term used generically to refer to those who work in the ECEC field directly with children, regardless of their qualifications or function. They are also referred to as 'professionals', 'practitioners', or 'teachers and caregivers' – these terms are used interchangeably.

28. A guiding curriculum framework promotes an even level of quality across different providers, age groups, genders or backgrounds. It also provides guidance and support for staff in their daily practice and pedagogical experiences, informs them on what is expected and needed and facilitates communication between staff and parents (OECD 2001, 2006). Curriculum guidelines can be developed at the national level, whereupon centres can adapt it to their own needs while being in line with the framework.

29. Implementation and knowledge about the pedagogical approaches and curriculum relies on staff's professional education and training (Sammons et al., 2002; Elliott, 2006; Kagan and Kauerz, 2006). The effect of high quality pedagogy is maximised when implemented in conjunction with parent support and home visits (Shonkoff and Philips, 2000; Elliott, 2006).

Physical aspects of the setting

30. Characteristics of ECEC environments not only play a role in safety and health but also in children's cognitive and social development, well-being and creativity. The NICHD (2002) found a significant link between positive care giving behaviour and the physical characteristics of their environment, e.g. the instruments and materials available within the setting, and the space requirements in more general terms. Maxwell (2007) identified that the quality of the physical environment relates to young children's confidence in their own abilities and competences.

31. The physical aspects of the setting and whether there are materials that support staff have an impact on staff's job satisfaction and practical behaviour and, thus, on child outcomes. Supporting healthy physical environments for staff and children means not only setting standards or regulations regarding exit doors, windows, kitchen and food preparation requirements, etc. These are important, but the design of the centre has impact as well. Olds (2001) notes that the design of the centre can affect the interactions between staff and children, children's behaviour, and children's cognitive and social activities.

Quality at structural level affecting child outcomes

32. A major reason for the interest in identifying structural features of high quality ECEC programmes and centres is because these are mostly features which can be regulated or guided at national level. For example, caregiver and teacher education, specialised and practical training, child-adult ratios and group size are, in most countries, the subjects of recommended or prescribed standards in ECEC regulation. These elements are widely accepted as indicators of structural quality, linked to the quality level and directly or indirectly to child outcomes or process quality. International research by the OECD (2001, 2006) and the European Commission (2004) indicate some additional factors which have been found to be of high importance at the system level to encourage high quality at the programme (process) level and might impact child outcomes.

Caregiver and teacher education, qualifications, and training

33. The link between levels of staff education, qualifications, and/or specialised and/or practical training process quality and child outcomes is perhaps the strongest in research on quality and child outcomes (Huntsman 2008; Loeb et al., 2004; Burchinal et al., 2002; Clarke-Stewart et al., 2002; Blau, 2000; Philips et al., 2000; Vandell & Wolfe, 2000; NICHD, 1996; and others).

34. Burchinal et al. (2002) found that the carer's or teacher's level of education is a better predictor of quality and has larger impact on children's outcomes than child-staff ratios or group size. The NICHD points out that, although it has an impact on infants, toddlers and older children, the caregiver or teacher's formal education is a stronger predictor for children of preschool age than for younger children (NICHD, 2000). ECEC staff members with a higher level of formal education have more specialised ECEC-related training, have less authoritarian child-rearing beliefs, acted more safe and clean, and stimulated child

development more often (NICHD, 2000). However, specialised and practical training has been more strongly associated with quality and outcomes in the case of infants and toddlers (Howes et al., 1992).

35. Additionally, professional development and education improves staff's capacity to create rich learning environments (Elliott, 2006; Neuman, 1999). There is a compelling and growing knowledge base which demonstrates that enriched stimulating environments and high quality pedagogy are fostered by better qualified practitioners, and that better quality pedagogies facilitate better learning outcomes. However, it is important to note that it is not the qualification per se that affects outcomes but the ability of the staff members to create a better pedagogic environment that makes the difference.

Child-staff ratio

36. Lower child-staff ratios, a smaller number of children per ECEC staff member within a room, have been associated with different developmental outcomes. A large body of research has found that children perform better in cognitive (mathematics and science) and linguistic (language, reading and word recognition) assessments when ratios are lower (Huntsman, 2008; Sylva et al., 2004, Love et al., 2003). While there have been some studies with contradictory results (Dunn et al., 1994; Holloway et al., 1988), the weight of evidence favours a conclusion that child-staff ratio in ECEC settings is associated with child outcomes. Clarke-Stewart et al. (1994) found that children receive less attention, affection, responsiveness and stimulation for development from caregivers each time a single child is added to a group. De Schipper et al. (2006) observed 217 caregivers each interacting in a play situation with a group of three children, compared with the same caregiver interacting with the same group plus two additional children – a ratio of 3:1 compared with 5:1. They found that, in addition to caregivers being more supportive, children were more co-operative in activities and interactions. A lower child-staff ratio improves the working conditions within the class- and playroom for caregivers and teachers since sufficient attention can be spent on different development domains (Rao et al., 2003; NICHD, 1996).

Group size

37. In many countries, regulations prescribe the maximum number of children arranged and supervised as a group, and most often this varies according to age, with group size for younger children being smaller. In settings where the group size was of the recommended size or below, process quality was higher (Huntsman, 2008; Burchinal et al., 2002; Clarke-Stewart et al., 2002; NICHD, 2000, 1998) in the sense that teachers acted more caring and stimulated action and thinking more often because their working conditions were experienced as more pleasant. Reversely, where group sizes were large, poorer process quality was found (Burchinal et al., 2000). However, the number of children in a group has not been found to be significantly associated with any other quality indicators (Huntsman, 2008; Blau, 2000; Howes et al., 1992). This might be because the impact of group size is difficult to tease out, as research on this specific factor is often combined or related to other factors such as staff qualifications and training or child-staff ratios (Munton et al., 2002; Fiene, 2002).

Staff wages

38. Staff member's wages and working conditions are strongly related to process quality (Goelman et al., 2000; Philipsen et al., 2000), affecting people's job satisfaction and work motivation and, with this, the quality of their teaching, caring and interactions with children. Staff turnover is relatively high in the ECEC sector in most OECD countries (Huntsman, 2008; Fenech et al., 2006). The high turnover rates are often linked to the low wages typically found among workers in child care, kindergarten or pre-school (Huntsman, 2008; Smith, 2004; Philipsen et al., 2000), which leads to higher job dissatisfaction and an unstable care giving situation.

Parent and community involvement

39. Highly effective programs like the Chicago Child Centred Programs and the Abecedarian Project are characterized by frequent contacts, intensive communication and good co-operation between centres and parents. Additionally, they co-operate with wider social services if circumstances are required to do so, e.g. when children are being abused or receive insufficient health care (Barnett & Masse, 2007; Temple & Reynolds, 2007). Involving parents furthers child-orientated staff behaviours and age-appropriate parental behaviours because it provides opportunities for teachers and parents to exchange information and experiences about their children. This, in turn, strengthens pedagogy and curriculum implementation. Moreover, it gives a positive signal to children that education is important.

40. Children's development can be indirectly influenced by providing support to families in childrearing through the ECEC centre and other community resources. Effective centres and programmes (e.g. Head Start) offer struggling parents opportunities (courses or home-visits) to improve interactions with their own children while developing childrearing and personal skills (Ludwig & Philips, 2007). This requires a good level of (practical) education and training of ECEC staff, good knowledge of educational and child developmental issues and structured planning (CQO study team, 1995; Hayes et al., 1990).

Political support and public funding

41. It is a high quality ECEC *system* that is the key to ensuring ECEC programmes and settings are of high quality. Strong public policy therefore forms the basis for a high quality ECEC system (OECD, 2006). High quality ECEC requires an adequate level of funding for provision of services and providing appropriate process characteristics, e.g. materials, the development of a good pedagogy, etc. Structural characteristics, like staff training, need funding and the development of a coordinated infrastructure. In order to publically fund ECEC, political support is of key importance (OECD, 2001).

42. Public funding of a programme or sector does not guarantee a certain amount of quality. Based upon practice and country experiences (OECD, 2001; 2006), sufficient public funding can provide greater stability to programmes with, in return, greater control by the government over quality levels and data collection – though there is no research evidence supporting this. Although a positive relationship has been found between the proportion of a programme's budget spent on staff wages and the level of quality (Philipsen et al., 1997), more in-depth studies on the effects of financing are needed to support the idea that funding and financing effects structural and/or process quality.

43. The amount of public funding raises concerns regarding *how* the budget is spent. This discussion includes issues of efficiency and equity (Cleveland and Krashinsky, 2004). As research evidence on quality in ECEC points out, several factors are of high importance and impact. Programmes with similar budgets might differ greatly in quality and in their ability to develop children. It is therefore not just the level of public funding that matters but what the funds are being spent on (Friendly et al., 2006).

Coordinated infrastructure: programme administration and management

44. Countries are more likely to provide high quality ECEC when they have coordinated infrastructure with strong structured management (OECD, 2001). Research from a number of countries describes that uncoordinated administration and management impedes access, increases fragmentation, creates differences in requirements and regulations, results in increased inefficiency and higher costs and can be counter-productive at policy level. This is because decisions made by one party might negatively affect the practices of another party or department – especially when responsibilities are divided between different departments or government levels, e.g. in split ECEC systems (OECD, 2006).

45. For an effective and coordinated infrastructure to improve quality, the European Union (2004) and the OECD (2006) identify a legislative framework as a necessary element. Legislation is found to be critical for clarity, effectiveness and sustainability of the sector and high quality (OECD, 2006).

Monitoring the ECEC sector

46. Regular monitoring is critical in identifying and rectifying problems. Systematic attention to monitoring and data collection is a key contributor to provision of equitable access to high quality ECEC (OECD, 2001). Although data collection and monitoring scans possible issues and struggles within the sector relevant to accountability and effectiveness, the instrument itself does not affect quality or a child's development.

Focus topics of literature overview

47. One of the most consistent findings in research literature is that the quality of the service and, in particular, the quality of the daily interactions between ECEC staff, children and their parents and peers has its largest impact on children's development. This conclusion has been confirmed by a large body of research evidence linking participation in high quality ECEC programs to both short- and long-term outcomes in both cognitive and linguistic development and prevention of delinquency rates and increased lifetime earnings (Barnett, 1995; Currie, 2000; Shonkoff & Philips, 2000; Heckman, 2010; and others).

48. Research and policy evaluations found that, in summary, the well-being of young children is dependent on two essential conditions. First, is the need for stable and caring relationships with people who provide responsive interaction and encouragement for learning and development. This can be established by educating caregivers, teachers and parents about children's development and how to stimulate their growth. Second, is the need for a stable environment that provides a range of growth-promoting experiences to promote cognitive, linguistic, social, emotional and health development.

49. Based upon research evidence, the focus of this literature overview will primarily focus on improving child outcomes by implementing policies on the following dimensions:

1. Family and community involvement: encouraging and improving family and community involvement in ECEC.
2. Pedagogy and curriculum: developing curriculum guidelines and implementing appropriate pedagogical practices.
3. Staff's education, training and working conditions: improving caregiver's and pre-school teacher's educational level, professional training opportunities and improving their working conditions.

PARENTAL AND COMMUNITY INVOLVEMENT

Purpose

50. The objectives of this section are two-fold:

- First, to identify effective ways of involving parents and communities in ECEC services to improve children's outcomes; and
- Second, to determine what is known about effective policy and practice in this field (i.e. 'what works').

51. In the early childhood years, 'parental and community involvement' refers to the formal and informal connections between the childcare or early education setting and the home or broader community, as well as parents' input at home or input from wider community services. Parental and community involvement in ECEC services is now more regularly implemented and encouraged in many OECD countries than ever before (OECD, 2001, 2006).

52. The OECD Starting Strong (2001) report identified four main reasons for involving parents in ECEC services, as follows:

- a. To build on parents' unique knowledge about their children, fostering continuity with learning in the home;
- b. To promote positive attitudes and behaviours towards children's learning;
- c. To provide parents with information and referrals to other services; and
- d. To support parent and community empowerment.

The importance of parents and the wider community

53. The critical role of the home and community environments in determining children's development is widely acknowledged: the earlier this influence is 'harnessed,' the greater the likelihood of later achievement (Cotton and Wiklund, 1989). Bronfenbrenner (1979, 1988) argued that to be effective and have a lasting impact, ECEC programmes need to involve the children's parents and communities so that all environments affecting children would foster similar goals. Research shows that successful ECEC provisions foster greater communication with parents, encourage parents to assist their children with school work at home, and recruit parents to work as volunteers or participate in governance boards and cooperate with the wider community (Field et al., 2007). Such collaborations are especially important in low income, minority communities where differences in socio-economic background and cultural values about child-rearing and education are likely to negatively affect child development (Larner, 1996).

54. "A strong connection between schools and communities assists children in developing the skills needed to be successful socially and emotionally, as well academically, and has been shown to be a significant factor in children's overall achievement" (Edwards et al., 2008). Parents who are involved in their children's early education and care exhibit increased self-confidence in their parenting and a more thorough knowledge of child development (Epstein, 2001). Researcher has also found that parent involvement in children's early education increases parents' understanding of appropriate educational practices and improves children's educational outcomes, especially in literacy (Cooter et al., 1999; Bryant et al., 2000).

55. The relationship between parents, communities and the day care/early education setting can improve the academic and behavioural outcomes of poor children by reducing the negative effects of deprivation (Weiss et al., 2008). The Effective Provision of Pre-School Education (EPPE) study found ECEC settings that produced good socio-cognitive outcomes for children had “strong parental involvement, especially in terms of shared educational aims with parents” and provided “regular reporting and discussion with parents about their child’s progress” (Siraj-Blatchford et al., 2003).

56. The Chicago Parent Centers model has been cited as evidence that parent participation has a major impact on children’s academic success and social development, and that it is a sure strategy for reducing the dropout rate. Each year parents took part in the programme increased the chances—by 16%—that their child would complete high school. For students whose parents were involved for the whole six years of the project, more than 80% graduated from high school, compared with 38% of students whose parents did not participate (Reynolds and Clements, 2005).

Defining parental and community involvement

57. There is no universal agreement on what ‘parental and community involvement’ actually entails, and what specific activities and behaviours are included within the phrase. The involvement can take a variety of forms and meanings, for instance depending on the education stage of the child concerned (e.g. early childcare or pre-school), and the perspective taken on the issue (e.g. early years practitioner, teacher, parent, researcher). Literature often uses the terms ‘family-school partnership’, ‘parental involvement’, ‘family involvement’ and ‘community involvement’ interchangeably, causing further confusion as to what is meant by each and their respective influence on outcomes.

58. The most common and widely used parent and community involvement strategies (Oakes and Lipton, 2007; Epstein, 1995) can be summarised into six categories of constructive engagement, including communication, parenting support and encouragement of learning at home which are all three child-centred. Involvement in the form of volunteering, decision making and partnering with the community are more centre-orientated.

Table 1: Types of parental and community involvement

Child-focused	
<i>Communicating</i>	Design effective forms of school-to-home and home-to-school communications about school programmes and children’s progress.
<i>Parenting</i>	Help all families establish home environments to support children as students (e.g. parenting classes).
<i>Learning at home</i>	Provide information and ideas to families about how to help students at home with homework and other curriculum-related activities, decisions, and planning.
Centre-orientated	
<i>Volunteering</i>	Recruit and organise parent help and support (e.g. helping to plan and run school events and fundraising activities, accompanying school trips, donating their time to improve facilities, or assisting in the classroom and sharing their skills and expertise).
<i>Decision making</i>	Including parents in school decisions, developing parent councils and parent-teacher organisations.
<i>Collaborating with community</i>	Identify and integrate resources and services from the community to strengthen school programmes, family practices, and student learning and development.

Source: Adapted from Epstein et al., 1995.

59. Child-focused involvement allows staff and parents to meet informally but regularly to maximise opportunities to discuss the strengths and progress of the child, instead of meeting only when problems arise. Parents’ needs regarding communication with the school include ongoing feedback about their

child's performance and behaviour, advance notice of curriculum and activities in the classroom⁸, and advice on how they can best support their child's learning at home (Russell and Granville, 2005).

60. Traditionally, ECEC settings are most active in getting parents to support the programme's agenda through communication and voluntary work. By using different forms of communication, e.g. letters to the parents, parent meetings and websites, preschools, kindergartens and care centres attempt to involve parents. This traditional strategy also seeks parent's support in some of the setting's activities. This can range from supervising the playground to organizing daytrips and participating in fundraising activities. More recently, it includes parents as participants in governance boards and other decision-making activities (Oakes and Lipton, 2007).

61. In addition, some ECEC settings offer direct support to parents through parenting classes, oftentimes with the support of community services. Research done on the Head Start programme in the United States has indicated that "participants in adult education classes reduce their reliance on public assistance, find employment, earn college credit or degrees, and own homes after their experience with the program" (Halgunseth and Peterson, 2009). The involvement of wider community services (e.g. health or social services and sport organisations) or community members can improve simultaneously children's school achievements and their social, emotional and health development (Oakes and Lipton, 2007).

Benefits of parental and community involvement

62. There is no strong evidence as to which particular strategy for involving parents or communities works best: it is generally recognised that there is no 'one size fits all'. There are a wide range of formal and informal strategies that can be combined to suit different contexts and population groups. The most common approaches are summarised in Table 2.

Table 2: Examples of approaches for parent and community involvement

Formal approaches	Informal approaches
Regular written report on child's progress and development	Regular informal discussions about child's progress (face-to-face)
Meetings with individual parents	Phone calls
Home visits	Folder including child's work done in school and home-based activities
Letters	Offering learning-through-play materials to use at home
Parents' evenings (with free crèche)	Regular newsletters
Curriculum events (with free crèche)	Drop-in sessions
Co-operation of providers with other services, e.g. health, sport, and social services	Coffee mornings
Parent Council	Open days
Inviting parents to events by other agencies – e.g. health – hosted in the ECEC centre	School trips
	Notice boards and posters
	Information and advice on accessing other services

Source: adapted from DfES, 2006 and Sime et al., 2009

63. It has been argued that "evaluating outcomes of parent or community involvement on children's performances and development is difficult due to varying definitions of what constitutes involvement and lack of agreement on how best to measure such involvement" (Marcon, 1999). However, there are a few studies that have compared different forms of parent or community involvement. Those studies were mainly in ECEC centres that made parent or community involvement a special focus of the programme.

⁸ 'Classroom' refers to any room in an ECEC setting in which the child is taken care of, he/she plays in, or a true classroom, i.e. the room in an ECEC setting in which the child spends its largest part of its time.

64. Most outcomes were found for parents, which can indirectly influence child outcomes, children's cognitive and linguistic development, and to a lesser extent, society in general. The outcomes for parents are either parenting outcomes or parent life course outcomes. Parenting outcomes include improvements in interactions with children, the home learning environment and parental understanding/knowledge of child development, while parent life course outcomes refer to e.g. education and training or employment (Yoshikawa, 1995).

Evidence of the impacts of particular types of involvement on child outcomes

65. Different types of parental and community involvement have been found to affect different groups of people in various domains, e.g. a child's reading competences, parent's employment status, mothers' interaction with the child, delinquency rates during teenage years and the costs of welfare support. A small but growing research base underpins the relevance of parental and community involvement in ECEC and the effects of particular forms and strategies on children, parents, and society.

Improving the home learning environment (HLE)

66. It has been argued that the most effective forms of parent and community involvement in ECEC services are those which encourage parents to work directly with their children on learning activities in the home. EPPE research has shown the importance of parent-child activities in contributing to the quality of the children's home learning environment. The EPPE results indicate that programmes which directly promote activities for parents and children to engage in together are likely to be most beneficial for young children" (Sylva et al., 2004). "Programmes which involve parents in cooperating with their children, supporting their work on homework assignments, or tutoring them using materials and instructions provided by teachers, show particularly impressive results" (Cotton and Wiklund, 1989).

67. The quality of the home learning environment is found to be strongly associated with the child's 'at risk' status. A poorer quality HLE in the early years has been put forward as one of the possible reasons for the lower attainment levels observed at the start of compulsory education in 'at risk' children. There are several ways in which ECEC services can help enhance the home learning environment, including providing activities and materials for parents and children to do together, offering parents tips on reading aloud to children and offering literacy learning kits. ECEC staff can also encourage parental involvement in early learning by providing them with resources and activities that further the work that is being addressed within the classroom. This helps families feel more connected to their child, as well as the programme (Halgunseth and Peterson, 2009).

Early literacy

68. A popular form of parental involvement seems to be in helping with children's reading development: this has been well researched and the benefits of the involvement evidenced (Keating and Taylorson, 1996). Research undertaken in the United States with three- and four-year-olds has shown that early learning activities at home do make a difference: children who are frequently read to and told stories are more likely to recognise all letters of the alphabet, count to 20 or higher, write their own names and read. In addition, children who are taught letters, words or numbers and are taken to the library regularly are more likely to show signs of emerging literacy (Nord et al., 1999).

69. The PIRLS study⁹, undertaken across 40 countries, has also shown a positive relationship between engaging in early literacy activities at home prior to compulsory education and reading performance at the age of 10. The study recorded the following parent-child activities: reading books, telling stories, singing songs, playing with alphabet toys (e.g. blocks with letters of the alphabet), playing

⁹ Progress in International Reading Literacy Study <http://pirls.org>.

word games, and reading aloud signs and labels. Findings showed that the reading performance of children in the highest frequency of parent-child activities (i.e. on a daily regular basis) was well ahead of that of their peers with lower frequencies of parent-child activities (Mullis et al., 2003; Mullis et al., 2007).

Wider cognitive development

70. Research work on parent-infant interactions within the HLE by Hart and Risley (1995) revealed significant effects on children's cognitive development. Children of parents who were least involved in the HLE at ages 10-36 months, scored less well on cognitive skills test (e.g. in mathematics) later in life than children who experienced positive parent-child interactions at the HLE. The same effects were shown in research by Sylva et al. (2004), and these outcomes were still continuing at age 7 plus.

Home visiting

71. Home visits undertaken by ECEC staff members and staff from other social organisations (e.g. child welfare services and health services) are beneficial to parents of young children: they are associated with greater confidence in parents' interactions with children's education programmes and greater knowledge in children's development. Children who receive home visits from ECEC practitioners have been found to have greater engagement in literacy activities and are more likely to choose to participate in group activities. Staff also benefit, as they gain positive relationships with children and families and a better understanding of how the child's home environment might affect school performance (Halgunseth and Peterson, 2009).

72. There is wider evidence on the benefits of targeted home visitation programmes such as HIPPY¹⁰. HIPPY is a home-based programme that centres on the role of parents as home educators. It focuses on pre-literacy and pre-numeracy and is provided for two years, starting when the child is four. The HIPPY evaluation in New Zealand showed that children who have participated in HIPPY have scored higher on a variety of school achievements (literacy, reading, word recognition, numeracy), adjust better in class and show less disturbing behaviour (e.g. less fighting with peers and more active participation). In particular, HIPPY children have been found to be less likely to become in need of targeted support for literacy skills development (BarHava-Monteith et al., 2009).

73. The High/Scope Perry Preschool programme¹¹ provides pre-school education and home visits to disadvantaged children during their pre-school years (from age three). The Perry Study stemming from the programme follows participants from age 3 through to 40. The programme lasts two years and consists of 2.5 hours/day of pre-school plus weekly home visits by pre-school teachers. Findings show that the impact of the programme varies by gender and with age. The programme appeared to have a significant effect on males' criminal activity, later life income and employment at age 27 and 40; whereas it had more effect on education and early employment for females aged 19 and 27. The general pattern is one of strong early results for females and later results for males (Heckman et al., 2010).

¹⁰ HIPPY is the Home Interaction Programme for Parents and Youngsters which originated in Israel in the late 1960s and has been implemented with positive results in a number of countries. More details are available at: www.hippy.org.il/.

¹¹ The High/Scope Perry preschool approach has its own curriculum (High/Scope curriculum) and is used in both public and private half- and full-day preschools, nursery schools, Head Start programs, day care centers, home-based day care programs, and programs for children with special needs. Originally designed for low-income, "at-risk" children, the High/Scope Perry preschool approach is now used for the full range of children and has been successfully implemented in both urban and rural settings both in the U.S. and overseas.

Parenting education

74. Parents' access to education services through the ECEC centres has been reported as key in empowering them to engage with their children's learning (Sime et al., 2009). Gains in parenting skills and knowledge of child development and learning were found through participation in education courses and involvement in the ECEC service (Mitchell et al., 2008). Furthermore, training parents of pre-schoolers to help their children's learning at home has been found to have positive results on later school measures, regardless of family background or income (Graue et al., 2004).

75. Early Head Start parents in programmes offering child development services with parenting education and home visits were found to be more supportive of their children during play, more likely to read to their children every day and smacked their children less after participation in the programme than parents who did not participate (Love et al., 2005). Parents in Toronto's integrated ECEC settings with a range of family support programmes were, after participation, more likely to talk directly with the practitioner and better able to help their children at home with learning and homework (Corter et al., 2006).

Active involvement

76. Writing in the context of compulsory education, Cotton and Reed Wikelund (1989) explain that the more active forms of parental and community involvement work best. These include greater communication with school, attending and supporting school activities, tutoring children using material provided by teachers and being actively involved in the activities and development of the child.

77. The Early Authors Programme is a United States-based 12-month early literacy intervention implemented in childcare centres in an ethnically and linguistically diverse, urban, low-income community. The programme approaches literacy skills by emphasising highly meaningful language interactions and positive attitudes through meaningful, empowering activities involving children and families (Bernhard et al., 2008). The intervention stresses the importance of active parental involvement in ECEC and contains five key aspects: a) involving literacy specialists working with preschool teachers; b) bringing technology and book-making equipment into the classrooms; c) children self-authoring books with the help of literacy specialists, teachers and parents; d) parents coming in for on-site group parent/family meetings in which parents and other family members shared family stories and, together, made books based on the stories; and e) frequent reading, sharing, display and dissemination of the children's self-authored books in the classroom and the larger community. The intervention did not focus on teaching children literacy skills specifically but concentrated on children and families creating meaningful self-authored texts on the assumption that this approach would motivate children, teachers and families to engage in literacy activities.

78. The evaluation included pre- and post-test assessments. Evaluation findings were found to be positive: the participating three- and four-year-olds' language (composite of expressive and comprehension) and literacy developmental outcomes were found to be enhanced by the programme activities. The programme appeared to not only increase children's absolute language skills but also prevent children living in poverty from continuing to fall further behind in comparison with national age norms. There was also evidence of a qualitative change that took place in classrooms: teachers and literacy specialists noted that "the children became more verbal, formed fuller sentences, and saw the connections between writing and reading". Qualitative data indicated that the programme strengthened the children's identities and fostered their self-esteem (Bernhard et al., 2008).

Collaboration with wider community resources

79. Research cites parent-family-community involvement as key to children's motivation for learning and development (Barton, 2003). Supporting ECEC practitioners and parents requires addressing children's social service and educational development needs; and this broad-based support is essential to diminishing development arrears. The positive impact of connecting community resources with children's needs is well documented. In fact, community support of the early development process is considered as one of the characteristics common to high-quality ECEC centres (Henderson et al., 2002).

80. In Canada, involvement with local organizations offering information to ECEC providers and the use of community-based resources (toy lending libraries, telephone support, etc.) positively correlates with more sensitive care-giving and children's early social development (Doherty et al., 2000).

81. In Ireland, partnerships between ECEC programmes and community services have been found to be effective in approaching and supporting harder-to-reach families such as gypsies and travelling families. Specialists offer those families tailored services designed with respect to their cultural context, which improve children's skills as well those of parents. The development of distance learning materials in collaboration with community members and consultants specialized in travelling education has enhanced the likelihood of achieving improved child outcomes on literacy rates and math skills. Specialists understand how to design effective learning materials for children within their communities, and parents learned how to implement different learning approaches for young children (Robinson and Martin, 2008).

82. In 1994, five Head Start programmes developed model substance abuse prevention projects with a goal to strengthen families and neighbourhoods of economically disadvantaged preschool children. The initiative, named 'Free to Grow', targeted families and neighbourhoods of Head Start children in an effort to protect them from substance abuse and its associated problems. It included a strong focus on community-based strategies in the form of coalitions, implementation of 'safe space' task forces that ensured safe and substance abuse-free spaces for young children, and training in substance abuse prevention. Different community services were included in the implementation, e.g. local police forces, youth organisations, churches and numerous grassroots organizations. Outcomes included increased parental involvement in ECEC, cleaner and safer schools and neighbourhoods, improved relationships among residents and between ECEC practitioners, parents and community members, and stronger community norms against drug and alcohol use (Harrington, 2001). A key success factor of these programmes was the substantial amount of funding, which made it possible to pay a monthly remuneration (\$100) to parents and community members who were the main implementers the programme.

Combination of different approaches

83. A programme or centre does not need to limit itself to one approach. Several forms of parental and community involvement can be used simultaneously and complement each other. Since ECEC settings provide services for a range of people with different backgrounds, not every strategy or type of involvement meets all needs or is suitable for each child, family or community. Therefore, implementing plural approaches may encourage parent and wider community involvement.

84. Hannon and Nutbrown (2001) have reported an experimental study regarding the effectiveness of an early literacy parental involvement programme, the REAL project (Realising Equality and Achievement for Learners). The project was delivered in ten pre-school centres in Sheffield (England) in areas of high deprivation. Eighty-eight families took part in the 12-18 month programme. Children were aged between three and three-and-a-half at the start. The programme included five components: home visits by the pre-school teachers; provision of literacy resources; centre-based group activities; special events (e.g. group library visits); and postal communication. Adult education for the parents was also incorporated into the

programme through an accredited course on REAL and information, advice and support to access other providers' courses. Each teacher was funded for release one half-day per week to work with eight families.

85. The evaluation provided strong evidence of the benefits of the programme to the children, parents and teachers. Parents' experiences were reported as "extraordinarily positive". Teachers greatly valued the opportunity to work closely with parents and found it changed their thinking, although they felt that other responsibilities in the school made their work on the project difficult. Parents and teachers noted 'global benefits' as well as specific literacy benefits for the children. Results showed the programme group was very definitely ahead of the control group in terms of literacy development and letter recognition (Hannon and Nutbrown, 2001).

Implementing effective parental and community involvement

Perceived barriers

Language and cultural barriers

86. Communication challenges might arise from professionals and parents speaking different languages or holding different values, and practices and experiences at home being different from school. Practitioners have been found to communicate more effectively with upper and middle class parents and least effectively with groups unlike themselves (Rous, 2003). Therefore, Rous notes that it is important to keep communication with parents simple and not patronising, avoiding use of jargon which can cause intimidation and misunderstanding. Translating written communication into the families' native languages might overcome this barrier. Another solution is to have a resource person – either a staff member or another parent – who can communicate with the parents in their first language (Ballen and Moles, 1994).

Stigmatisation

87. Some forms of parental or community involvement might bring along fears of stigmatisation. When targeted home visits by ECEC practitioners or community services are included in the programme, parents might not wish to be actively involved (Johnson et al., 2005). A solution for this might lay in the implementation of regular home visits to all families as is the case in Head Start programmes.

Insufficient knowledge about possibilities to engage or participate

88. When parents and community members were asked about awareness and use of possibilities to engage in formal and informal ways in ECEC, low-income parents tended to be unaware of the possibilities available in their local community (Johnson et al., 2005). Ghate and Hazel (2004) note that it is important for ECEC centres and community services to take a pro-active approach to raise parents' awareness of possibilities to be involved.

Parents' low education level

89. Parental involvement can be seen to reinforce existing educational inequalities associated with socio-economic background, gender and ethnicity. Parents' poor literacy and numeracy skills and bad experiences of their own schooling have been reported in some cases as a major barrier to parents' ability to contribute to their children's learning. They may also impact their self-confidence and self-esteem. Other explanations for lack of parental involvement include: parents' lack of understanding on how to effectively engage children in learning and a school culture seen as too formal (Sime et al., 2009).

Attitudinal barriers

By parents and community members	By staff
Hostility against perceived authority figures.	They believe they do not have the right skills / training to support families.
Feeling it is not their job and they should not impede on their children's schooling.	Feel it is not their responsibility to work with parents; it takes time away from working with children, which they see as their major priority.
Low aspirations for the children.	

Source: Logan & Feiler 2006; Hannon & Nutbrown, 2001; Keating & Taylorson, 1996; Rous, 2003; Russell & Granville, 2005; Sime et al., 2009

90. Research has indicated that attitudinal barriers on the side of parents and community resources can be largely overcome by pro-active behaviour and raising awareness by ECEC staff members (Dauber and Epstein, 1993; Siraj-Blatchford et al., 2003). Staff indicated that they often feel they do not have the right skills or training to actively involve families or community resources. A main factor in preventing or overcoming this barrier is implementing this subject in practitioner's initial education or training courses. Parent and community involvement can also be implemented in the ethos or policies of a centre, emphasising that children's development is the responsibility of the whole society (Sime et al., 2009).

Time barriers

91. Involving parents that work full-time, non-standard hours or those getting back into employment might be a particular challenge. It is important to offer different forms of parental (or community) involvement, e.g. newsletters by e-mail and parent meetings in the evenings or different times that better suit parents (Rous, 2003; Russell and Granville, 2005).

Key success factors*Ethos*

92. Building parental involvement into the ethos or policies of ECEC centres, whereby staff and parents can develop mutual trust and respect has been reported to be crucial. A parental involvement ethos encourages ECEC staff to be non-judgemental, to take time to support parents and to listen to their suggestions (Mendoza et al., 2003; Sime et al., 2009).

Clarity of objectives

93. An audit of policy and practice carried out across English local authorities (DCSF, 2007) found that most (local) strategies stress the importance of establishing effective partnerships with parents (and communities) but lack clarity about what this means in practice. Before a parental or community involvement scheme is introduced, it is vital that professionals and families/communities work together to define the aims and objectives. Discussions between stakeholders will facilitate agreement about why such scheme is needed, how it will be implemented and what the expectations are of all parties and individuals. Identifying mutual objectives by all stakeholders are found to be meaningful and more appropriate for children's and community needs (Keating and Taylorson, 1996; Zellman and Waterman, 1998).

Pro-activeness

94. Research (Siraj-Blatchford et al., 2003) indicates that in more disadvantaged areas, staff in ECEC settings and other social services have to be proactive in influencing and supporting parent involvement in order to support children's learning. The 'excellent' settings in disadvantaged areas recognise the importance of and are pro-active in encouraging parental involvement in the educational process by taking

the time to share their curriculum, pedagogical strategies and educational and development aims. They also offer advice on how parents could complement children's development within the home learning environment and how this impacts their development.

95. The Centre on Families, Communities, Schools and Children's Learning (1994) indicates that parents who receive frequent and positive messages from teachers tend to become more involved in their children's education than do other parents. Dauber and Epstein (1993) found that many parents respond to encouragement from educators. The best predictor of parent involvement was what the centre did to promote it. The centre's attitudes and actions were more important than parents' income, educational level, race or previous volunteering experience in predicting whether the parent would be involved in the centre.

Staff education and training

96. ECEC centre's attitudes and actions toward parent involvement are largely influenced by administrators and practitioners. Because leadership is critical, administrators and practitioners may need special training to help them develop the skills needed to promote family-centre partnerships and community involvement (Dauber and Epstein, 1993; Siraj-Blatchford et al., 2003; Sime et al., 2009).

97. Ballen and Moles (1994) note that "schools and school systems seldom offer staff any formal training in collaborating with parents and communities or in understanding the varieties of modern family life. There are myriad ways for families and communities to become more involved in schools, preschools, and care centres, and training can help teachers and other staff members change the traditional images of contacting parents only when a student is in trouble or when the school needs help with a bake sale. Practitioners' training programmes can include general information on the benefits of and barriers to parental and community involvement, information on awareness of different family backgrounds and lifestyles, techniques for improving two-way communication between home/community and school, information on ways to involve parents in helping their children learn in school and outside, and ways that schools can help meet families and communities' social, educational, and social service needs."

Flexibility

98. Parents and communities are not a homogenous group and different approaches need to be adopted for different population groups. "Recognizing the needs of culturally and economically diverse people can be the most valuable way to build a strong foundation for parent or community involvement" (Rous, 2003). Managers of ECEC centres need to be aware of different values and family circumstances and try to meet those needs. It has been argued that uneven parental involvement results in greater inequity, so it is particularly important that real efforts are made to reach out to the most deprived families.

Funding

99. High quality ECEC centres with intensive parental or community involvement receive financial resources or obtain grants to ensure an effective implementation. Without (additional) investments it might be hard, or even impossible, for many ECEC programmes to encourage and improve parental and community engagement. Due to the time it may take for successful implementation, the need for additional training, staff members, better planning or funding is most likely necessary.

Conclusions

100. Some key points arose from the overview of the literature that was undertaken:

- ECEC settings that actively encourage parental and community involvement (through shared educational aims, regular communication about the child's progress, promoting activities for

parents/communities and children, or involving community resources in their development practices) have a positive impact on children's outcomes.

- There is good evidence that a child's home learning environment in the early years is strongly associated with cognitive outcomes, including language skills and literacy.
- Outcome evaluations relating to parental involvement in ECEC and its influence over children's outcomes show the potential of e.g. early literacy projects to make a difference if delivered through ECEC services and in close partnership with parents. Including community resources in the implementation of projects has benefits for community members as well as for children.

101. While there is a general recognition of the importance of parental and community involvement in improving children's learning outcomes, determining what precisely constitutes successful parental or community involvement in ECEC services is much harder. A number of long-term child outcomes could be measured to test the effectiveness of involving parents or communities in different ways; but for robust data to be gathered and sound conclusions made about 'what works', significant investments would be required to undertake well-designed experimental longitudinal research. Additionally, parental and community involvement often implies additional spending since including parents and the community in ECEC might take time, require additional materials and include different resources.

102. The literature highlights the fact that there is no 'one size fits all' answer to parental or community involvement in ECEC services. Different parents and communities will have varying needs and expectations about the levels of parental, societal and professional responsibility regarding children's development, and strategies to involve them will need to be flexible.

CURRICULUM AND EFFECTIVE PEDAGOGY

Purpose

103. The objectives of this section are three-fold:

- Analyse the effects of different curricula and pedagogical approaches in ECEC on child development;
- Identify the key factors of effective curricula and pedagogies; and
- Determine what is known about effective policies and practices in this field (e.g. the success factors and barriers of implementation)

104. The goal is not to identify one ‘best’ curriculum or pedagogy: it does not exist. Rather, the aim is to identify which features of a curriculum and pedagogical approach may be most effective for improving child outcomes and which conditions foster implementation.

105. Curriculum is a complex concept containing multiple components, such as goals, content, pedagogy and instructional practices. Definitions about the purposes of curriculum and an appropriate pedagogy have been long debated (e.g. Marshall et al., 2000; Goffin and Wilson, 2001; Eisner, 2002; NAEYC, 2003) but are influenced by many factors, including society’s values, content standards, research findings, community expectations and culture and language. Though definitions vary per country, state, region and even programme, high quality, well-implemented ECEC curricula provide developmentally appropriate support and cognitive challenges and can lead to positive child outcomes (Frede, 1998).

The importance of curriculum and pedagogy

106. Young children are spending increasing amounts of time in settings other than homes and with adults other than their own parents or close family. The actions of these adults determine the quality of children’s learning opportunities. Within an ECEC setting, primarily teachers and caregivers interact directly with children, and their actions determine children’s development possibilities.

107. In the past, it was assumed that pedagogical aims applied only to the age group three to six years. But contemporary research argues that learning occurs and can be supported from the earliest age (Shonkoff and Philips, 2000). What was seen almost exclusively as a care period is now recognised as an important moment in the human life cycle for brain, cognitive and social development (Lindsey, 1998; Shonkoff and Philips, 2000). The early development period is becoming a focus for policy-makers, as the realisation grows that from birth, children enter the foundation stage of lifelong learning. How early childhood services for younger children are organised and conducted has become an important public policy issue.

108. Infancy, toddlerhood and the preschool years are times of intense intellectual engagement. Children from birth to age seven make rapid progress in making sense of the world on many levels: human relationships, counting, reasoning, problem solving, word recognition and speaking (Philips et al., 2000). A blend of genetic and contextual factors is involved in this process, particularly the interactions a young child experiences with his/her direct environment.

109. A comprehensive body of research from the last three to four decades has pointed out that ECEC staff characteristics promoting healthy child development and improved child outcomes include warmth, nurturance, stability, predictability and caring responsiveness. Peisner-Feinberg et al. (2000) have found

that children who have securing and caring relationships with their caregivers and teachers better interact with other adults and peers and are more co-operative in class and willing to work harder.

110. However, programmes' educational and developmental effectiveness varies largely, and this variation is associated with 'classroom' context (Philips et al., 2000). The REPEY study (Researching Effective Pedagogy in the Early Years) of high quality practices associated curriculum differentiation and nurturing staff-child interactions with improved child outcomes. The evidence suggested that the better more age- and child-appropriate pedagogic practices were implemented, the greater the effect was on children's social and cognitive development, with greatest gains in mathematics, word recognition, spelling, reading and communicative skills with adults and peers (Siraj-Blatchford, 2004). The curriculum and how it is taught, i.e. the pedagogical approach, are found to be key factors in the quality and effectiveness of the programme (Shonkoff and Philips, 2000; NICHD, 2002; Siraj-Blatchford, 2004).

111. With trends toward decentralisation and diversification of policy and provision, there is more variation in programming and quality at the local level. A common framework can help ensure an even level of quality across different forms of provision and for different groups of children, while allowing for adaptation to local needs and circumstances. A clear view and articulation of goals, whether in the health, nutrition or education field, can help foster programmes that will promote the well-being of young children and respond adequately to children's needs.

112. Well-defined educational projects also serve the interests of young children. In infant-toddler settings with a weak pedagogical framework, young children may miss out on stimulating environments that are of high importance in the early years. At the programme level, guidelines for practice in the form of a pedagogical or curriculum framework help staff to clarify their pedagogical aims, keep progression in mind, provide a structure for the child's day and help focus observation on the most important aspects of child development (Siraj-Blatchford, 2004).

113. For early childhood staff, the curriculum can also be an indicator of belonging to a professional group that has responsibility for the foundation stage of lifelong learning. Signs of professionalization are particularly important for staff members looking after the youngest children as they are easily perceived by parents as being unskilled. Pedagogical frameworks may not only strengthen the educational emphasis of the programme but also improve the status of early childhood workers. When staff have been directly involved in the development of frameworks, guidelines may legitimise good practice and encourage further reflection and improvement. A framework can also provide opportunities for staff to communicate with parents in order to articulate and discuss the goals and methods of activities taking place in the ECEC setting. Guided by common goals, staff and parents can work together to support the development and learning of individual children (OECD, 2006).

What pedagogical and curricular approaches are used in ECEC?

114. The nature of educational experiences offered to children reflect the expectations held by society, (policy-makers and practitioners in particular) about appropriate pedagogies and practices. Curricula in the 18th and 19th centuries focused on what children should know to become decent, participating, law-abiding citizens with subjects focusing on religion, (classical) literature and moral values. Providing health and nutritional assistance to children (and their families) who were poor or living in poor health conditions was also of high importance (Nourot, 2005).

115. During the 20th century, a connection between child development theories and the curriculum was established which increased political and scientific interest in the subject. Different curriculum approaches were developed that were based on the dominant developmental theories during these years

(Frede, 1998). The different approaches can be divided into three broad movements of ideas and thinking about development and learning.

Direct instruction curriculum

116. The first approach – the didactic or direct instruction curriculum – stems from behaviorist or social learning theories that view learning as an input by the environment. The teacher presents information to a class of children and uses structured teaching-and-practice lessons. The teacher teaches the children discrete skills and his/her method includes frequent repetition and praise. It used to be the most widely implemented curriculum in primary, secondary, tertiary education, but now, schools tend to choose different teaching methods. In early education, this curriculum is less often implemented due to the young age of children in kindergarten and pre-school.

Socialisation curriculum

117. At the other end of the continuum is the maturationist theory, which leads to an open classroom or socialization curriculum. This theory derives from the belief that children must direct their own learning and will learn if developmentally ready. Practitioners provide stimulating materials and support for children's choices. The main goal of curricula based on this approach is socialization, and the approach relies on unstructured play as its main activity. Such models allow great freedom for teachers to develop activities based on their own experiences, creativity and understanding of child development. Thus, content and activities can be based on the interests and needs of individual children and reflect the values of the community and programme. One the most well-known examples of the maturationist curriculum theory is the Montessori method that implemented the idea of 'children directing their own learning'.

Montessori approach

118. The Montessori method is an approach to educating children based on the research and experiences of Italian physician and educator Maria Montessori. The method involves a curriculum of learning that comes from the child's own natural inner guidance and expresses itself through outward behavior as the child's various individual interests are at work. Lessons are given in such a way that the teacher's personal involvement is reduced to the least amount possible, so as not to interfere with the child's free learning directly through the materials. The method provides a range of materials to stimulate the child's interest through self-directed activity. In the first stage of development (0-6 years), these materials are generally organized into five basic categories: practical life, sensorial, math, language and culture. Other categories include geography (a child's perception of herself in space), history (a child's perception of herself in time) and science (interactions with the natural world) (Hainstock, 1997; Standing, 1998). The method is primarily applied with young children (up to 6 years of age), due to the young child's sensitivity to conditions in the environment. However, it is sometimes conducted with elementary age (6–12) children as well as at the middle and high school levels (Montessori, 1972).

131. Lilliard and Else-Quest (2006) concluded that Montessori students in the U.S. (at ages 5 and 12) performed better than control students. This improved performance was achieved in a variety of areas, including not only benefits in subjects like language and math, but in social skills as well; though by age 12, academic benefits had largely disappeared.

Constructivist curriculum

132. The third theoretical tradition comes from the constructivist theories of Piaget (1952) or Vygotsky (1978). Piaget's stage theory of development had a powerful influence on thinking and construction of curriculum in Western countries. His work has been challenged by researchers and modified several times. Nevertheless, his idea of progressive construction of development through distinct

stages remains the way in which children are grouped in many countries. The emphasis on children engaging in active exploration and the importance of environment and resources as stimulation for learning is still widely implemented in all forms of education and learning, e.g. ECEC centres, primary schools, secondary education and higher forms of schooling. Vygotsky focused attention on the influence of the contexts in which children learn and the crucial role of adults and peers as stimulus in learning.

133. In general, adherents of interactive or constructivist curricula view learning as an active exchange between child and environment. Teachers initiate activities designed to foster children's reasoning and problem-solving abilities, but they also interact with children during child-designed activities to enhance learning. Peer-to-peer interaction is viewed as essential to the learning process, in which the idea of conducting tasks in partnership which you cannot complete alone is essential (referred to as 'proximal development' by Vygotsky). Models derived from constructivist theories respect teachers as decision-makers and expect them to design activities and interactions to meet individual and community needs and interests (Bredenkamp and Copple, 1997). Many modern curriculum approaches in pre-school and child care are based upon the ideas of 'constructivism' and are widely used model in schools and ECEC centres.

134. DeVries and Goncu (1988) compared the social-cognitive development of 40 preschoolers in the United Kingdom from constructivist and Montessori programmes while playing a board game. Analysis of interpersonal negotiating strategies and conflict management showed that children from constructivist programmes were more advanced in their social cognitive competence than were children in the Montessori programmes.

Developmentally Appropriate Practice

135. One of the most well-known practical approaches within this curriculum is the Developmentally Appropriate Practice (DAP). The DAP approach is largely implemented in the United States, since it is promoted by the National Association for the Education of Young Children (NAEYC). The characteristics of the DAP approach also form the core of curriculum guidelines for ECEC in the United Kingdom and Northern Ireland.

136. Developmentally Appropriate Practice is a perspective within early childhood education whereby a teacher or caregiver nurtures a child's social/emotional, physical and cognitive development by basing all practices and decisions on: i) theories of child development; ii) individually identified strengths and needs of each child uncovered through authentic assessment; and iii) the child's cultural background as defined by community, family history and family structure. The approach is characterised by a balance of child-initiated learning and guidance from staff members. Active involvement is highly stimulated as well as playtime, though this is not the exclusive medium for learning. The approach provides a wide range of different activities, e.g. counting, reading stories, spelling, outdoor playing, drawing and dramatic play. These activities are carried out in a mix of small groups, the whole group or independently. Practitioners are expected to teach and educate by demonstrating, questioning, modelling, suggesting alternatives and providing reflection to children's work. Staff members systematically observe children's behaviour and learning progress (Barratt-Pugh and Rohl, 2000; Miller et al., 2002).

Experiential Education

137. The Experiential Education approach was developed by a group of Belgian academics (Laevers, 1994; Laevers and Moons, 1997) and has become a popular model for ECEC settings in the Netherlands and Flanders. It emphasises the relevance of emotional well-being and children's involvement as necessary dimensions for high quality. The latter is measured by the Leuven Involvement Scale, which ranges from no activity through regular involvement to intensive and intentional involvement. Laevers believes that involvement is essential for what he refers to as 'deep-level' development characterised by continuous

concentration, intrinsic motivation and working in groups to achieve what you cannot yet do by yourself. To achieve intense involvement by all children, practitioners must engage children in their activities, the information they share and the questions they pose. In sum, this approach requires staff members to stimulate children in their practices and thinking, to be sensitive towards them and to give them autonomy. The model has been adopted by Pascal and Bertram and used for the Effective Early Learning (EEL) project that is used widely in England to develop good quality ECEC practices and support evaluation of programmes and settings (Pascal et al., 1998; Pascal and Bertram, 2002).

High/Scope Curriculum

138. The High/Scope curriculum was developed by Weikart and colleagues as part of a targeted intervention programme for young disadvantaged children. It is a set of guiding principles and practices that can be adapted to fit different age groups or ECEC settings. The core idea is that children learn better by active experiences that express their interests. When children make their own choices for practices and activities, they ‘naturally’ engage in different interest areas and experiences that are key to development. The curriculum identified 58 experiences as highly relevant for early child development, which have been arranged in five main topics: creative representation; language and literacy; initiative and social relations; movement and music; and logical reasoning (Stephen, 2006).

139. Several studies found positive child outcomes for children who participated in a programme that implemented the High/Scope curriculum (e.g. Sylva and Nabuco, 1996). One of the most well-known studies is by Schweinhart and Weikart (1996, 1997) who followed ‘High/Scope curriculum children’ through age 27. Children randomly allocated to intervention programmes using the High/Scope curriculum completed more years of education in comparison to children with similar backgrounds. They were significantly less often involved in criminal behaviour, had higher earnings and were more likely to own a home. Heckman (2008) adds that, because of these beneficial outcomes for society, ECEC programmes with well-designed curricula and pedagogies can reduce costs for governments on welfare programmes, social benefits and can significantly reduce crime costs.

The Reggio Emilia approach

140. The Reggio Emilia Approach originated in Italy and is an educational philosophy focused on preschool and primary education. It is based on the principles of respect, responsibility and community through exploration and discovery in a supportive, enriching environment founded on the interests of the child through self-guided curriculum. The approach aims to develop learning competencies through creative communication (speaking, drama plays, music, drawing, etc.) and dialogue, so that children will develop thinking capacity and construct their own theories and understandings. Content knowledge is considered secondary to learning. Practitioners are seen as guides who learn together with children and adopt a listening role. Collaboration in group work (e.g. for projects) forms a large part of the curriculum. Practitioners document the children’s progress and behaviour through the projects, which provides staff members with detailed insight into children’s learning. This information is shared regularly with parents and even the community. Parents are a vital component to the Reggio Emilia philosophy, viewed as partners, collaborators and advocates for their children (Stephen, 2006).

Te Whariki

141. The first national early childhood and care curriculum in New Zealand was developed by researchers May and Carr (1991, 1993) in co-operation with a broadly representative development team including the main Maori early childhood organisation (New Zealand Ministry of Education, 1996). Te Whariki adopts a specific socio-cultural perspective on learning that acknowledges different cultural and social contexts. A social and interactive way of learning is recognised as highly important in stimulating

early development. The approach promotes the different cultures of New Zealand and works from the Maori principle 'empowering children to grow'.

142. The curriculum is built around five 'pillars' of child development: well-being, belonging contribution, communication and exploration. For each of these 'pillars', the developmental, cultural and learning goals are formulated. Within 'communication', for example, it is articulated that children should experience cultural stories and symbols, while 'contribution' points out that children should have opportunities to learn with and alongside other children. Spontaneous play and learning through play are goals of the approach, but play is not given the same importance within the Te Whariki curriculum as in some other ECEC curricula. Practitioners have the task to support children in achieving all of the goals in ways that are age and culturally appropriate. May and Carr (2000) explain that the aim is 'the development of more complex and useful understanding, knowledge, and skills attaché to cultural and purposeful contexts'. Children are often, but not always, distributed in mixed age groups in the Te Whariki approach, while the needs and capacities of each child are being acknowledged and addressed.

The Swedish Curriculum for ECEC

143. The first Swedish National Curriculum was adopted in 1998. The curriculum sets goals for early education while maintaining the play-based kindergarten tradition (Swedish Ministry of Education and Science, 1998). To adapt the curriculum to local settings and needs, the curriculum does not include any detailed guidance. The idea of children's learning driven by play and meaning-making led to a focus on nurturing the child's need for exploration and knowledge through play and social interactions with adults and peers. Explorations are encouraged by creative activities, discussions and reflections. The core of the Swedish curriculum is the dialogue between adult and child and independent meaningful actions. Practitioners are expected to make local decisions about how to create an environment that stimulates these engagements and practices.

144. The Swedish Curriculum includes five groups of goals, the first one referring to norms and values (developing care and respect, justice and equity) and the promotion of democracy. The second includes development and learning through dispositional goals (responsibility, critical thinking and problem thinking), emotional goals (feelings of security and development of an own identity), and content-related issues goals (culture, science, reading, mathematics etc.). The third group of goals includes influencing the child through developing the ability to express feelings and thoughts and stimulate co-operative activity and decision-making. The fourth goal is establishing relationships between the ECEC setting and the child's home, while the fifth one refers to co-operation between ECEC settings, schools and leisure time centres (Stephen, 2006).

Evidence of its impact on child outcomes

145. There is little evidence that evaluates the impact of a particular curriculum or pedagogical approach. Whenever they have been conducted, they are not comparable studies. However, many studies analysed what kind of practices and behaviours contribute to improved child outcomes.

Curriculum content

146. What children should learn is influenced by children's age, the knowledge they already encompass, and what policy-makers and community believe they should know. There is a general agreement that good ECEC curricula are not just about prescriptive school readiness or early academic skills: a programme's curriculum should attend to children's overall development. This is not only because of the role social emotional development plays in a child's ability to learn and the importance of enhancing children's early learning skills in a variety of areas, but also because much of the economic benefits of

attending high-quality preschool come from a combination of social emotional and academic competencies (National Institute for Early Education Research NIEER, 2007). Analyses such as EPPE, REPEY, the High/Scope Curriculum, and research by the NAEYC (National Association for the Education of Young Children), NICHD and the European Commission shows that child-driven curricula implementing a holistic approach to child development have been found to be most beneficial for children's early outcomes and later development.

Early literacy

147. The importance of literacy has received considerable emphasis. This is due to the difference that being fully literate makes to both life chances and personal enhancement of the individual and society (Early years special interest group, 2005). Research has shown that proficiency in written language builds on well-developed spoken language and on the ways through which children learn to read and write. For this, print awareness and phonological awareness are important. It is of high relevance for young children to grasp that print is speech translated into the form of a picture. Understanding that print has a communicative function is the starting point of literacy (Clay, 1966, 1972). After this, the understanding of facts will follow, such as that words represent a unit of meaning, a letter represents a unit of sound within a word, and that punctuation symbols do not represent a sound at all (Reid, 1966; Downing, 1979).

148. There is a substantial body of experimental psychological research evidence that indicates that it is essential in literacy to be able to distinguish the individual and constituent sounds in words, better known as phonemic awareness. This develops children's speech and speaking capabilities. Bryant et al. (1989) demonstrated a relationship between a young child's ability to identify rhyme and early successful reading. This is, according to researchers, the precursor to full phonological awareness (Clay, 1972; Downing, 1979; Bryant and Bradley, 1985; Bryant et., 1989).

Mathematics

149. Mathematics is the foundation for success in a variety of content areas during a child's early educational experience. Mathematics is crucial for future success in school and in life. In today's technology-driven society, greater demands have been placed on individuals to interpret and use mathematics to make sense of information and complex situations. As a result, the understanding and application of numbers, problem-solving and reasoning skills are important aspects of children's holistic development (v/d Rijt and van Luit, 1998).

150. Research has shown that arithmetic difficulties later in life can be explained by an insufficient development of early mathematical competence. The results of a study (v/d Rijt and van Luit, 1998) with attention to match competences for children aged 4-6 years show that it is possible to stimulate the development of early mathematical competence among young children. Children learned to use skills and solution strategies in combination with each other in a context of games and everyday activities. The programme has been found to have a positive influence on the development of early mathematical competence, with largest effects on classification of numbers, using counting words, counting and general knowledge of numbers (v/d Rijt and van Luit, 1998).

Science

151. When a child experiences science-related courses early in life, he or she is found to be encouraged to ask questions, think more critically, experiment, develop his/her reasoning skills, read and write. Studies suggest that children become better problem solvers and even experience a raise in their IQ when they are taught principles of logic, hypothesis-testing and other methods of reasoning, dimensions that are all tackled in science practices (Bybee and Kennedy, 2005; Dewar, 2009).

Art

152. There is little attention in research to children's use of art practices and its developmental outcomes. In 2004, neuroscientists and cognitive scientists from seven universities studied whether different forms of arts might affect other areas of learning. One of the researchers, psychologist Michael Posner concluded that the arts can train children's attention, which in turn improves cognition. Another researcher, Elizabeth Spelke, a neuropsychologist at Harvard University, looked at the effects of music training in children and adolescents and found a 'clear benefit': children who had intensive music training did better on some geometry tasks and on map reading. However, none of the researchers found any concrete evidence that art makes children smarter (Gazzaniga, 2005).

153. This can be explained mainly by the fact that arts programmes teach a specific set of thinking skills rarely addressed elsewhere in curriculum. One key skill is 'learning to engage and persist,' meaning that the arts teach students how to learn from mistakes and press ahead, how to commit and follow through (Hetland and Winner, 2007). The research also found that the arts help students learn to envision, i.e. how to think about that which they can't see. The ability to envision can help a child generate a hypothesis in science later in life or imagine past events in history class (Hetland and Winner, 2007).

Physical and health development

154. The gross motor behaviours (such as crawling or walking) involved in active outdoor or indoor play with other children are related to children's development of social skills and an understanding of social rules (Adolph *et al.*, 2003). Motor development is influenced by children's physical health and the possibilities children have to move and develop motor skills in different opportunities, e.g. by organising gym classes or through free play time. Through health education, young children become aware of the dimensions of good health. British Sure Start Programmes¹² with an integrated approach to physical development, health care and hygiene practices are found to have positive effects for children and their parents. Children have improved hygiene habits after participating in ECEC programmes that included courses on hygiene and health or have specific hygiene and health guidelines. The same children were also found to have improved weight/height for age in comparison to children who did not benefit from such practices (National Evaluation of Sure Start NESS, 2007). Since parent involvement is an important aspect of the Sure Start programmes, the practices were also found to impact parent's behaviour: after participation they improved their diet and nutrition habits (NESS, 2007).

Pedagogical approach*Importance of interactions and play*

155. A NICHD study notes that it is important to acknowledge that children's main sensory, cognitive, linguistic and social growth develops through play, exploration and interactions with others; and that systematic instruction does not have the same positive effect on early development (NICHD, 2000). Highly instructive, performance-orientated early childhood programmes with strong staff control over activities and relatively low levels of staff warmth are found to have a negative impact on children's motivation to learn. Children experiencing such direct instruction curricula avoid challenging tasks, are less confident about their own skills and abilities and experience less enjoyment when working than children who are encouraged to collaborate, have a choice in activities and experience caring staff-child interactions (Stipek

¹² Sure Start is an English UK Government initiative with the aim of giving children the best possible start in life through improvement of childcare, early education, health and family support, with an emphasis on outreach and community development. The programme was originally intended to support families from pregnancy until children were 4 years old but the brand was extended to cover an undefined responsibility up to age 14, or 16 for those with disabilities.

et al., 1998). Children in mainly teacher-initiated activities also showed more evidence of stress, e.g. nail-biting and turning away from tasks (Shonkoff and Philips, 2000).

Child-initiated and teacher-initiated activities and free choice

156. Children involved in activities that include acts of scaffolding by ECEC staff members, interacting with peers and stimulation of independent thinking and self-regulation have been found to positively impact children's IQ and language competences as well as their social skills (Shonkoff and Philips, 2000). Montie et al. (2006) analysed data from pre-primary programmes in ten countries¹³ to identify how classroom practices and child approaches towards children aged four are related to social and cognitive competences at age seven. In all countries, children in ECEC programmes with dedicated time for child-initiated, free choice activities in addition to practitioner-related activities, scored significantly higher on language tests at age seven than children in programmes with merely didactical practices. Free choice activities provide opportunities for the child to verbally interact with peers and for practitioners to introduce new vocabulary (Montie et al., 2006).

Warm and responsive staff behaviour and close child-staff relationships

157. The EPPE project found that the ways in which practitioners worked with children is particularly important. Although the ECEC settings are subject to the same or similar regulations and curriculum guidelines, settings vary in the impact they have on children's developmental progress. A significant relationship was found between better classroom practices and better social/behavioural and intellectual outcomes, especially for literacy, reading, maths and science. Practitioners with higher qualifications were better able to establish warm, responsive relationships (Sylva et al., 2004). Research supports that quality interpersonal relationships have positive impacts on children's attitudes toward learning. Pianta (1999) explains that supportive relationships with teachers meet children's emotional needs, allowing them to regulate their behaviour and develop skills essential for academic demands: "Relationships are in large part the infrastructure of school success not only for high-risk children but for all children". Various educational and psychological professional organisations (e.g. NAEYC, NICHD) recommend fostering positive staff-child relationships to enhance child motivation to learn.

Factors that contribute to the effectiveness of curricula and pedagogical approaches

159. The REPEY study analysed the pedagogic models and practices being applied in 12 different ECEC settings in the UK. All 12 settings in the EPPE study were classified as having good or excellent practices and were found to further child development in cognitive and social outcomes. Improved child outcomes were linked to ECEC settings that:

1. View cognitive and social development as complementary. The elements of ECEC programmes that enhance social and emotional development are just as important as the components that increase cognitive and linguistic competences.
2. Provide adult-child interactions that stimulate 'sustained shared thinking' (i.e. thinking within a group of peers and one or more adults about solving a problem, answering a question, etc.) and open-ended questions to encourage independent thinking.
3. Implement clear behaviour and discipline policies that support children in rationalising and talking through discussions and conflicts.

¹³ The countries included in the research are: Finland, Greece, Hong Kong, Indonesia, Ireland, Italy, Poland, Spain, Thailand, and the United States.

4. Provide children with an equal balance of practitioner-initiated work and learning through child-initiated activities and play.
5. Provide differentiated learning environments that meet the needs of young children (e.g. age-appropriate practices).
6. Have strong parent and community involvement, who all have shared aims with regard to child development.
7. Provide informative feedback to children during their activities, and provide reporting and information sessions to parents about their child's development.
8. Provide a strong educational focus with trained teachers working along with less qualified staff members.
9. Have practitioners with good curriculum knowledge and knowledge and understanding of how young children learn, i.e. pedagogy.
10. Have long-serving caregivers/ teachers and other staff members who work in the same setting (Sylva et al., 2004:1).

160. Despite that the REPEY research focused on British ECEC settings, research evidence indicates that the same features of curricula and pedagogies are effective in improving child outcomes within a broader context. Moyles et al. (2002) found that the principles for effective curriculum and pedagogy in general are similar to those arrived at in the EPPE and REPEY project. However, they suggest that effective practice does not only need pedagogical understanding about class/playroom actions but also needs an appropriate working climate, assessment, management, staff development and support for practitioners' work.

161. Because class/playrooms are becoming more culturally diverse with children from different backgrounds and home environments, acknowledging that these children might have different needs is important for the effectiveness of a programme. Differences in cultural backgrounds or home environments manifest themselves in children's behaviour and motivation to learn. Settings and activities that are designed to accommodate young children's different approaches to learning have been found to reduce disruptive and inattentive behaviours like fighting with peers, unwillingness to respond to questions or cooperate in class (Weisner et al., 1989; Philips et al., 2000).

162. Young children's cognitive and socio-emotional development often occurs through interactions with physical objects (NIEER, 2007). Thus, one additional area of inquiry for preschool decision-makers might be the materials used as part of any curriculum. When considering appropriate materials, ECEC programme stakeholders might wish to determine if such materials are closed- or open-ended. Closed-ended objects have one single answer or correct way to use them (e.g. a puzzle) and promote a single specific skill. Conversely, because there are many "correct" ways to use them, open-ended materials—such as blocks, sand, clay, or art supplies—can promote children's language growth, imagination and problem solving skills each time children interact with them. The materials within a room partially determine whether a practitioner can effectively implement appropriate practices and pedagogies and contribute to the effectiveness of certain practices (Sutterby and Frost, 2006).

163. Bowman et al. (2000) conclude that a curriculum may contribute more to some dimensions of early development (e.g. literacy, linguistic skills and math) than other dimensions. However, good quality provision always builds on understandings about what children can learn and how they learn. Therefore, Bowman et al. argue that any curriculum should build on and engage children's existing understanding, i.e. it should be age-appropriate and meet children's needs. Additionally, a curriculum should facilitate the development of concepts and enhance children's learning strategies and overall development.

164. Findings about intensity and duration are somewhat mixed. The EPPE study found that full-time attendance did not lead to better outcomes for children than part-time provision, although the attendance in months was positively associated with intellectual development (Sylva et al., 2004). On the contrary, Robin et al. (2006) found children from low-income families in good quality extensive duration programmes (8 hours per day for 45 weeks per year) improved significantly on vocabulary and literacy at the end of first grade compared with children in half-day programmes. In the US, a study of children attending some form of ECEC for less than 15 hours or for more than 30 hours per week found positive effects for children attending a higher number of hours. Children who attended an ECEC programme for at least 15 hours per week had higher pre-reading skills than those attending for less than 15 hours (Loeb et al., 2005).

Designing effective curriculum and pedagogy guidelines

165. The quality and content of curriculum and pedagogical approaches influences the effectiveness of any ECEC program. The promise of ECEC cannot be met if the curricula implemented are not rigorously designed, carefully researched and implemented as intended. The NAEYC set up national early education standards and guidelines for the United States and concluded that a major design risk is that the responsibility for meeting standards be placed on children's shoulders rather than those who provide opportunities and supports for learning. They conclude that clear, research-based guidelines for the content, goals of early learning experiences and pedagogical approaches can help focus instruction and increase the likelihood of later positive outcomes (NAEYC, 2002).

166. Young children's learning is connected to and dependent on culture, language and community. Research shows that there are wide cultural variations in the experiences of young children as well as in their individual needs. Guidelines should be flexible enough to encourage professionals to implement culturally and individually relevant experiences in the curriculum (Garcia-Coll and Magnuson, 2000).

167. An especially challenging task is to determine how the expectations of curriculum guidelines may best be linked to specific ages or developmental levels. According to the NAEYC (2002) a good approach may be to provide flexible descriptions of research-based learning trajectories or developmental practices, referring but not too tightly linked to age-related yearly accomplishments.

168. The processes by which guidelines are developed and reviewed contribute to their credibility and effectiveness. The wide range of cultures, communities, settings, and life experiences within which young children are educated make it essential to engage many participants in developing and refining guidelines (NAEYC, 2002; STAKES, 2003). When Finland decided to develop an ECEC curriculum, a steering group and working committee of policy-makers and representatives of the ECEC sector were set up. Additionally, a number of ECEC experts were invited to contribute to the work of the committee and group and they were asked to comment on the guidelines to ensure that relevant stakeholders agreed on the content (STAKES, 2003).

Implementing effective curricula and pedagogical approaches

169. Implementation of a curriculum framework that includes an age-appropriate and culturally relevant pedagogical approach almost always includes bridging some possible barriers. Knowing what barriers policy makers can face and identifying what works based on evidence and country practices increases the knowledge of policy makers and can support them in implementing or improving curriculum and pedagogy approaches (OECD, 2006).

Perceived barriers

Insufficient knowledge about appropriate practices for a diverse group of children

170. What children should learn through a curriculum is influenced by children's ages and contexts. In a study by Buchanan et al. (1990), practitioners considered themselves least knowledgeable about issues regarding diversity. According to more recent research, many of them still do not know how to deal with children from diverse cultures (Daniels and Shumow, 2003). This problem is often addressed in practitioner's preparation through incorporating a socio-cultural knowledge base in the practitioners' curriculum, self-examinations of their own cultural experiences and examinations to their test practitioners' knowledge on the cultures of their students (Zeichner and Hoeft, 1996; Daniels and Shumow, 2003). The goal of these practices is to help future practitioners develop cultural sensitivity, learn about children's experiences in the contexts in which they are working and develop competences to adapt their practices to such contexts and experiences. There is some evidence suggesting that practices like these are effective in helping ECEC staff develop cultural sensitivity. However, very little evidence exists showing that they actually influence child outcomes (MacPhee et al., 1994; Zeichner and Hoeft, 1996).

171. In addition, policy makers can lack knowledge about child-appropriate curricula or the ECEC sector in general. To overcome or prevent this, a curriculum framework can be set up in co-ordination with practitioners and experts. The curricular guidelines for ECEC in Finland, for example, have been designed in open dialogue with different stakeholders like municipalities and educators (STAKES, 2003).

Programme assessment

172. Because of the more holistic goals of present-day curricula, assessment of the programme goals is often considered a challenge. Carr (2001) developed the learning story approach for assessment of Te Waraki's goals as an alternative to traditional assessment. The learning story approach stimulates practitioners to record what children are doing, document it and discuss the evidence after which decisions are made about how to encourage and support each child's further learning and development. The same kind of assessment is used in the Reggio Emilia approach.

Insufficient curriculum content and pedagogical knowledge

173. Although research has indicated that practitioner's awareness and confidence in subject and pedagogy knowledge is necessary, practitioner's knowledge on this is often inaccurate (Kallery and Psillos, 2001) or inadequate (Siraj-Blatchford et al., 2003). Increased curriculum knowledge creates more confident staff members who are more open to children's interests, ideas and questions (Grossman, 1990; Anning and Edwards, 1999). Limited knowledge can be attended to through professional development. Studies of professional development in the ECEC sector show that increased knowledge enables appropriate curriculum planning to occur and guides pedagogical approaches and documentation that facilitate meaningful learning for children (Watters et al., 2001; Kirova and Bhargava, 2002).

Key success factors

Defining a knowledge base for ECEC

174. The concept of curriculum as organised knowledge is a critical starting point. The way in which knowledge is organised and defined in goals is oftentimes related to the values and ideas of dominant cultural groups (Young, 1999). To enhance learning, early development and child outcomes, it is relevant that the knowledge base reflects children's and communities' needs. Consultation with different stakeholders (e.g. policy makers, experts, practitioners) is often a first step in defining a knowledge base

for ECEC. Knowing what young children need to learn, how they learn and which capabilities they have to develop per age-range is the basis of any successful curriculum (Bredekamp, 1986; Stonehouse, 1999).

Professional education and ongoing training

175. Practitioners' guidance of children's learning is fostered by understanding how knowledge, practices and language socialisation patterns contribute to children's ability to function within an ECEC setting (National Research Council, 2001; Daniels and Shumow, 2003). Practitioner's preparatory education and qualifications are key in ensuring that staff members understand early development and can implement adequate practices in the classroom. On-the-job (in-service) training or ongoing training courses can increase staff members' knowledge of curriculum implementation and applying a nurturing, stimulating pedagogical approach. In-service training provides a valuable opportunity for staff to become familiar with frameworks and guidelines as well as approaches to use them in groups or classrooms.

A positive and workable environment

176. Staff's behaviour can be affected adversely by mental health problems, stress or illness leading to less caring child-staff interactions affecting children's social development. These issues can be fostered or triggered by unfavourable and unpleasant working conditions (Shonkoff and Philips, 2000). Providing a pleasant, respectful and supportive work environment is important to keep turnover rates low but also to assure that staff members enjoy their workplace, which impacts their relationships with children and leads to more caring, nurturing behaviour and higher practitioner responsiveness (Shonkoff and Philips, 2000).

Providing guidance or access to advice for staff

177. Providing guidance on how to build positive relationships that facilitate child development is of importance for all ECEC staff members working directly with children. Few ECEC programmes include sufficient professional expertise on this, while data suggest that attention to guidance on relationship building can be fruitful for young children's development (Booth et al., 1989; Shonkoff and Philips, 2000). This can be done in initial education or on-the-job training courses. Access to pedagogical advice for practitioners who wish to provide more favourable conditions and practices furthers the implementation of appropriate pedagogy and curriculum practices (Shonkoff and Philips, 2000; Daniels and Shumow, 2003).

Involving relevant stakeholders: parents and the community

178. As governments move toward a more consumer-oriented approach to policymaking, greater participation of parents in setting the vision and curriculum of each centre results in settings that meet the needs of children, families and the wider community (OECD, 2001). After children themselves, parents are the first experts on their children and can assist staff to tailor programmes to the needs of particular children or groups. The approach is to learn from the unique knowledge that parents, other community members or organizations from diverse backgrounds can contribute. Close co-operation between staff and parents ensures that ECEC activities take the home and living conditions of the children into consideration, and helps in identifying and assisting children in need of health, educational or social welfare support. However, to adapt a curriculum to children's, parents' and communities' needs requires some level of flexibility (Fiese et al., 2006). If preschool stakeholders view parent and community involvement as a key contributor to programme effectiveness, curricula should provide materials and suggestions to help build programme-family/community partnerships and establish ongoing meaningful communication with families and communities about children's progress (Pianta and Kraft-Sayre, 2003).

Conclusion

179. Central to quality ECEC is effective curriculum and pedagogy. Key elements of this are the involvement of parents and the wider community, the richness and appropriateness of staff interactions with children and their scaffolding strategies, especially guiding, modelling and questioning. Curriculum and pedagogy are central to supporting and strengthening young children's learning and development since these are 'direct' practices a child is experiencing when attending an ECEC setting.

180. Research has found that young children benefit more from the curriculum when they are engaged and involved. Particularly for younger children, firsthand learning through direct interactions is key. At every age during the early childhood years, play can stimulate children's engagement, motivation and lasting learning. Learning is facilitated when children participate in a variety of activities and engage in relevant conversations with adults and peers. Particular features of and expectations for ECEC practices vary with cultural and socio-political conditions in a society. Effective curricula allows for flexibility to meet children's and the community's needs.

181. There is no evidence to suggest that one curriculum is superior, but there is widespread academic support for some features of early years education as crucial for early development. These features include: a holistic view of what a child should learn, and how a child should learn; active learning; respect for children's ability to self-motivate and self-teach; and the importance of positive interactions between children and adults and between children themselves.

182. The real challenge lays in the implementation of an appropriate curriculum. Creating a powerful learning environment and putting in place an appropriate pedagogical approach demands a lot from ECEC staff. Thus, professional development is highly important in the implementation of new or adapted curricula. Parents and communities can contribute to this either by providing additional knowledge on the progress and behaviour of children or by providing assistance in deciding what is developmentally appropriate for children and meeting children's educational, social and health care needs.

PROFESSIONAL EDUCATION AND WORKING CONDITIONS

Purpose

183. The objectives of this section are three-fold:
- Analyse the effects of staff development and their working environment on ECEC staff's effectiveness and child outcomes;
 - Analyse the factors regarding different education levels, training possibilities and working conditions that affect child outcomes; and
 - Determine what is known about effective policies and practices in this field (e.g. the success factors and barriers of implementation).

Staff's education, training, and their work environment: why does it matter?

184. The caregiver or teacher is the centre of the child's environment and experiences during the hours of out-home-care or education. At the heart of providing child-appropriate practices and positive experiences is the practitioner's ability to structure environments that promote optimum engagement for children. Staff's knowledge of children's learning needs and their knowledge and understanding of curriculum determine the effectiveness of their practices and interactions. International research is unequivocal about the importance and impact of staff quality on children's outcomes (Darling-Hammond, 2000; Hattie, 2003, Rowe, 2004, Elliott, 2006).

185. Early childhood studies showing better outcomes for children demonstrated that the quality of pedagogy and curriculum and the capacity of the staff matter. Research highlights the benefits to children when ECEC practitioners are professionally qualified and possess good knowledge about the curriculum and pedagogy implemented. Initial education and training in areas such as early child development and early education increase the likelihood that practitioners are effective in promoting the educational, physical, socio-emotional and healthy development of children (e.g. Epstein, 1995; Howes et al., 1995; Lee, 1999; Sammons et al., 2002).

186. Given the links between staff competence and quality curriculum and pedagogy at process level, the clear associations between staff qualifications and specific pedagogical and content knowledge are to be expected. However, it is not the qualification per se that affects outcomes but the ability of the staff member to create a better pedagogic environment that makes the difference (Elliott, 2006).

187. A clear indication of the impact of practitioner quality comes from EPPE research. This study found that higher proportions of staff with low-level qualifications were associated with poorer child outcomes on social relationships with peers and children's co-operation and were associated with higher levels of antisocial behaviours. Practitioners with specialized training and higher education were linked to positive child-adult interactions including praising, comforting, questioning and responding to children (e.g. Epstein, 1993; Whitebook et al., 1993; Shonkoff and Philips, 2000; Elliott, 2006). Practitioners with inadequate knowledge miss opportunities to scaffold learning and encourage children's independent thinking and learning (Makin et al., 2000; Siraj-Blatchford et al., 2002; Thomson et al., 2005; Elliott, 2006). Evidence of staff members' limited knowledge of good literacy environments has been linked to poorer literacy environments, which had negative effects on children's reading, spelling, word recognition and literacy scores (Wylie, 2004).

188. These findings highlight the importance of the practitioner's preparation, education and training. Targeted professional development has been found to improve the practitioner's capacity to create richer learning environments, which produce better outcomes for children (Neuman, 1999; Elliott, 2006). However, the ability of caregivers and teachers to attend to children's needs is not only influenced by internal resources like educational attainment, training and even emotional health, but also by external circumstances, e.g. their work environment, salary and work benefits. Particularly in the ECEC sector, working conditions and remunerations are poor. Poor working conditions and poor compensation provide little incentive or support for attracting and keeping (appropriately qualified) ECEC staff. This leads to high turnover rates in the sector, which disrupts the continuity of care, negates professional development efforts, harms overall quality and negatively affects child outcomes (Siraj-Blatchford, 2002; Elliott, 2006).

Improving child outcomes through teacher and caregiver's effectiveness

189. Research demonstrated that practitioner's competences and work conditions are linked to appropriate pedagogy and curriculum use, which results in quality ECEC provision. Staff quality is crucial to the effectiveness of early childhood education and care (Elliott, 2006). Given these important links, this section addresses a number of possibilities on how to improve ECEC staff's effectiveness and construction of knowledge about child development, curriculum and pedagogy, and the benefits of particular strategies. Since professional development and work conditions of ECEC staff are found to highly impact child outcomes, these subjects are addressed.

Professional development

190. The ability to create rich, stimulating learning environments is jeopardised when staff have inadequate or incorrect content and pedagogical knowledge. Therefore, it is highly relevant to identify *what* practitioners need to know about children. This is an issue that deserves concentrated attention and discussion both within the field of educating practitioners and with practitioners on-the-job who are working directly with young children. When child outcomes (in different domains) are the goals of ECEC, it is highly important that the child's developmental perspective is included in the practitioner's pre-service curriculum. A developmental perspective means attempting to understand the world from a child's perspective (Olsen and Brunner, 1996). Gearhart et al. (1995) found that practitioners who focused on children's thinking during staff development changed their practices to include children more in their activities than practitioners without access to this knowledge. They also knew better how to apply knowledge to teaching and how to interact appropriately with young children. Ideas and possibilities about how to improve staff's effectiveness and understanding of children are presented below.

Initial (pre-service) education: level of formal education and qualifications

194. Despite strong links between staff quality and appropriate practices and behaviours, there is an enormous variability in staffing competence, qualifications and initial education within and between ECEC services in OECD countries (OECD, 2006). In many countries, there is a lack of agreement on what qualifications and education levels are appropriate for staff in the ECEC sector. Since the importance of well-qualified staff is central to quality child outcomes, the existence of poor qualified staff members in ECEC is a worldwide concern (NIEER, 2003; OECD, 2006). In early literacy, math and science, opportunities for scaffold learning and encouraging children's thinking and problem solving are missed when staff members lack relevant qualifications and training (Makin et al., 2000; Siraj-Blatchford, 2002). On the contrary, the presence of good qualified staff positively influences child outcomes on literacy, language and math skills and has a positive impact on the behaviour of other staff members (Siraj-Blatchford et al., 2002).

195. Several research reviews have come to the conclusion that the presence of bachelor (BA) level practitioners with specialised training in ECEC leads to better outcomes for children (Howes, 1997; Bowman et al., 2001; Barnett, 2003; Whitebook 2003). Children whose teacher/caregiver has at least a BA degree in ECEC were observed to have higher percentages of responsive involvement scores than children with practitioners with a lower educational background. They also had higher frequencies of language play and positive encouragement and were more often engaged in creative activities (CQCO, 1995; Blau, 2000). Howes (1997) found that, in the United States, practitioners with a BA degree acted more caring and understanding towards young children aged three to five and had better quality interactions than practitioners with a low post-secondary degree. In turn, practitioners with a low post-secondary degree were found to perform better in their job than practitioners with only a high school diploma. Children attending programmes with practitioners who only have a high school diploma scored significantly worse on vocabulary tests and reading (Hone and Kritchevsky, 1972; Dunn, 1984).

196. Berk (1985) and Arnett (1989) evaluated the importance of degree and training in ECEC in securing quality. Fifty U.S. practitioners were observed during Arnett's study who either had no prior ECEC training, two years of college-level training courses, four years of college-level training courses or a specialised bachelor degree in early childhood education. Teachers with a bachelor degree were less authoritative towards young children and interacted more positively with them than any other practitioners in the study. The staff members with two or four years of training courses were less authoritarian in their child rearing behaviours than practitioners without training. Although practitioners with a bachelor degree were found to be most effective in working with young children, Arnett's research findings suggest that college-level training courses positively influence practitioners' behaviour and practices. He concludes that not all staff members necessarily need BA level education.

197. The large-scale National Child Care Staffing Study (NCCSS) collected information on 865 teachers and 444 other ECEC practitioners in the U.S. They found that more formal education was better. Practitioners with some college-level early childhood training or a BA degree in early childhood development engaged in more appropriate care giving and were more sensitive than practitioners with training at the vocational level or lower (Whitebook et al. 1990; Howes et al., 1992).

198. Having a degree in early childhood education can be a factor in a teacher's effectiveness, but a degree alone does not guarantee teacher competence. The quality of the education programme – i.e. how well it prepares new teachers by, for example, grounding them in knowledge of child development and academic subject areas – may be a more critical factor in a teacher's ability to influence children's development and learning in a positive way than having a degree (Hyson et al., 2009).

On-going (in-service) education and training

199. Research stresses the importance of ongoing professional learning in maintaining practitioner's effectiveness and helping staff implement evidence based practices. In-service education and training complements and strengthens existing professional skills (Darling-Hammond, 2000; Gilliam and Zigler, 2003). It has the potential to fill in the knowledge and skills that teachers may be lacking—for example, knowledge about child development, practical skills in planning and implementing a developmentally appropriate curriculum, and how to work with diverse groupings of children and families (Cassidy et al., 1998; Espinoza et al., 1999). The term 'in-service education and training' includes all planned programmes of learning opportunities for staff members of ECEC providers for the purpose of improving the performance of individuals in already assigned positions. In-service training and education can be conducted 'on the job' or can be provided by an external source (training institutes, colleges, etc.). It can be provided through staff meetings, workshops and conferences, subject training, field-based consultation training, supervised practices, mentoring, etc.

Staff meetings

200. The most common way of providing in-service training is by organising staff meetings. Although not considered as a training source, depending on the nature and purpose of the staff meeting, they can offer professional insights and facilitate knowledge sharing among practitioners. Staff meetings may provide opportunities for peer interaction, asking relevant questions and advice from one another, and may give practitioners new insights and knowledge on how to better develop children (Lee, 1999). In ECEC centres with regular staff meetings, professionals were more satisfied with their work, and had more positive attitudes towards their tasks and children (Maslach and Pines, 1977; Aronson, 2001).

Conferences and workshops

201. Conferences and workshops are like open classrooms: they can offer a wide variety of choices. Participants can choose which workshops or sessions are most interesting for them and attend those that are most valuable for their professional development. They offer opportunities to meet other professionals, which can bring along fresh ideas and stimulus for improving classroom practices. Centres or programmes that offer participation in conferences or workshops to their staff members, acknowledge the relevance of practitioners' work and their capacity for further development (Harris, 1989). However, Howes (2003) found that while workshops or conferences can improve practitioner's knowledge on certain subjects or topics, "coherent teacher preparation programmes at various levels of cost and time investment are more successful in terms of effective teaching and children's experiences than is having teachers simply attend workshops or conferences".

Subject training

202. Key for effective professional development is to identify training strategies that help practitioners stay updated on scientifically based methods and curriculum subject knowledge so that they can apply this knowledge in their work practices (Snow et al., 1998; Jackson et al., 2006). A particular example of subject training is the HeadsUp! Reading (HUR) professional development training. This is a 15-week literacy training series with forms of supplementary mentoring on ECEC professionals' practices. Children that attended classes of professionals that participated in HUR improved their literacy and reading skills more than children in control classrooms. Additional mentoring did not enhance children's literacy/reading skills more than just the HUR training alone. The treatment was found to be equally effective for English- and Spanish-speaking children. Providing teacher training on various behavioural and socio-emotional topics to practitioners in ECEC settings in Connecticut has found to decrease children's behaviour problems with largest positive effects in hyperactivity. It also increased teacher-reported self-competence, teacher beliefs and practices regarding developmentally appropriate pedagogy and job satisfaction through decreased job stress (Gilliam, 2007).

Field-based consultation and training

203. Field-based consultation provides practitioners an opportunity to receive feedback on their practices. Oftentimes, observations of the caregiver or teacher in action by an outsider take place as the basis for helping practitioners to think analytically about the effects of their practices. This can be a very effective form of training and learning (Howes et al., 1995). Worldwide, there have been different practices in field-based consultation and training. Fantuzzo et al. (1997) randomly assigned on a small-scale Head Start teachers and parent volunteers to either guided practice training including feedback, or to workshop training. The professionals and volunteers in the first group (guided practice training) showed higher levels of positive classroom interactions than their colleagues that attended workshops. Guided practice professionals and volunteers demonstrated more praise and supportive physical contact with children.

Supervised practices

204. In the experimental KEEP study (Kamehameha Early Education Program) in Hawaii, kindergarten teachers were supervised by experienced external consultants. They observed instructional practices, took data on teacher's engaged time and provided feedback to the practitioner. During weekly conferences, the feedback was discussed and, in co-operation with the consultants, teachers made planning decisions. As teachers learn from this advice and gain expertise over time, they can provide much of the feedback and direction to themselves. These practices increase teacher's understanding of the effects of their practices, which in turn can benefit child development (Gallimore and Tharp, 1990).

Mentoring

205. Mentoring practices are gaining recognition as possible effective training opportunities that can professionalize early childhood staff (Martin, 1998; Jackson, 2006). Mentoring is viewed as 'a nurturing process in which an experienced person educates, encourages and advises a less experienced person as part of staff development' (Anderson and Shannon, 1988). Successful mentoring programmes are those in which the mentor had a high level of expertise and established positive relationships through the development of trust, openness, ongoing support and regular communication (Hueng-Ling, 2003; Jackson, 2006). Assessment of a 25-hour mentoring model in the United States, found that mentored (new) teachers significantly improved practices, enhanced quality of child-staff interactions and increased self-confidence and self-esteem (Martin and Ashelman, 1999). Howes et al. (2003) found that within a group of primarily African-American and Latino practitioners without any high-level initial education who were working in high-quality programmes serving low-income children, better staff responsiveness was predicted by being mentored early on and receiving consultation from other staff members. They gained better understanding of young children's learning and were better capable of incorporating that into practice.

Specialisation in ECEC

206. The degree of specialisation refers to any education or training focusing on early childhood education, child development or similar, above and beyond general educational attainments. Research has identified the particular role of the practitioner's degree in child development, especially the added value of a bachelor's degree of college-level training courses. Most often, a degree with a specialisation in ECEC or development produces staff behaviour consistent with quality ECEC provision, which supports better developmental outcomes for children (Whitebook, 2003). The National Day Care Study data showed that in classrooms led by teachers with child-related education, teachers interacted more with children, and children showed more co-operation and greater task persistence (Whitebook, 2003). Teachers with more education focused on child development and early childhood education have a better knowledge base of developmentally appropriate practices (Snider and Fu, 1990). Research in Canada found that early childhood professionals with an education specific to early childhood education and care are less likely to leave their current position (Child Care Human Resources Sector Council, 2009).

Work conditions

207. The research literature suggests that certain characteristics of the work environment are critically important in shaping teacher behaviour, effectiveness and retention (Torquati et al., 2007; Whitebook et al., 2009). Even with the best education and training, practitioners may be hindered in applying what they have learned if the various aspects of the work environment do not support them. Work conditions include characteristics of work and the workplace that can influence the ability of professionals to do their work well, and satisfaction with the workplace, work tasks and the nature of the job (Torquati et al., 2007). ECEC research has investigated a set of workplace characteristics (e.g., adult-child ratios and staff compensation). Researchers have typically linked these characteristics to

differences in programme quality (as measured by global assessments) and/or to staff turnover, and less often to measures of child development (Whitebook et al., 2009).

Salary and benefits

208. Low wages are detrimental to not only ECEC professionals (who often have low salaries) but also for the children whom they are serving. Low wages are associated with high staff-turnover rates, which influence children's language and socio-emotional development as well as the relationships they form with the practitioners (Philips et al., 1991; Whitebook, 2002; Torquati et al., 2007). Low wages are often correlated to low education and training requirements for professionals (Whitebook, 2002; Torquati et al., 2007) and the perception that working in the ECEC sector is not perceived as a high status profession (Ackman, 2006).

209. Low satisfaction with pay was found to be the most important work-related factor influencing people's desire to leave their job (Stremmel, 1991; Manlove and Guzell, 1997). As Manlove and Guzell (1997) indicate, "the extremely low wages in ECEC impact quality primarily by preventing qualified and committed individuals from considering working in child care or early education in the first place..." On the contrary, better paid staff members are more likely to feel more appreciated, better supported and have high levels of commitment to the centre (Goelman and Guo, 1999).

210. Additionally, the number of vacation days and compensation for additional work hours were positively correlated with job satisfaction, the quality of staff-child interactions and the frequency of caring and responsive behaviours of staff which indirectly influenced children's socio-emotional development and willingness to participate in class (Doherty et al., 2000). In short, providers who reported better working conditions were observed to provide better care and education.

Child-staff ratio

211. Staff-child ratio has been consistently associated with child outcomes and overall ECEC quality (Helburn and Howes, 1996; NICHD, 2000; Torquati et al., 2007). While there have been some studies with contradictory results (Holloway and Reichhart-Erickson, 1988; Dunn et al., 1994), there is a larger evidence base indicating that lower child-staff ratio's are significantly associated with higher quality and better child outcomes (Burchinal et al., 2000; Burchinal et al., 2002; de Schipper et al., 2006; Huntsman, 2008; Whitebook et al., 2009).

212. Most studies have examined the effects of child-staff ratio's on outcomes for children aged three to five/six years, but there is evidence indicating that it has a stronger correlation with child development for infants and toddlers (Hayes et al., 1990; Cleveland et al., 2007; de Schipper et al., 2006). Many early childhood educators (e.g. Lally et al., 1994; Munton et al., 2002; NICHD, 2002; Goelman et al., 2006) believe anything less than a 1:3 or 1:4 ratio for children under two years of age is insufficient to allow staff to interact effectively with each young child. The reasons for this are varied but include that lower ratios enable staff to develop meaningful relationships with the children in their care and create a less stressful environment for child carers to work in. As the number of children per staff member increases, staff spend more time in restrictive and routine communication with children but less in positive verbal interaction. For older children in ECEC, other ratios were found to be suitable, depending on the children's age, although research is inconclusive on what ratio is most suitable. Most research indicates that a ratio of 1:7 to maximum 1:9 is best (Munton et al., 2002; NICHD, 2002).

213. Research by the U.S. Department of Health and Human Services showed that in centres where there are lower child-staff ratios, there was a reduction in the transmission of diseases because caregivers are better able to monitor and promote healthy practices and behaviours; caregivers are enabled to have

more positive, nurturing interactions with children and provide children with more individualised attention; there is more developmentally appropriate caregiving and sensitivity, more contact (e.g., talking, playing, touching, and laughing), more responsive and stimulating behaviour and less restriction of children's behaviour; and there is more verbal communication between caregivers and children, which appears to foster language development in children (Fiene, 2002).

214. In addition to child-staff ratio, Goelman et al. (2006) note that the number of adults within a classroom impact quality and job-satisfaction as well. They found that the quality of the classroom environment improves with every additional adult in that room. Their findings differ slightly from the findings regarding staff-child ratio. In their study, they suggest that while a 1:4 staff-child ratio in an infant centre might contribute to the overall classroom quality and improve child outcomes, a centre with two adults for eight children can provide additional advantages. First, it provides additional supervision and it gives the staff members opportunities to consult and discuss work challenges. Second, it has been found to contribute to staff satisfaction with the work environment (Goelman et al., 2006).

Group size

215. Group size was found to have a positive effect on overall quality (NICHD, 2000, 2002; Burchinal et al., 2002; Clarke-Stewart et al., 2002), however, it has hardly found any effects on child developmental outcomes (Howes et al., 1992; Dunn et al., 1994, Blau, 2000). The effects that were found are related to teacher stress – larger groups size might lead to increased stress, less positive staff behaviour and less appropriate classroom practices (NICHD, 2002). It was also found that rates of stomach illness and ear infections were higher in young children (0-3 years) in child care arrangements participating in large groups (larger than recommended). The recommendations by the NICHD (2002) advise a maximum group size of six children when they are aged 6 months to 1.5 years; a maximum of eight children when they are 1.5 to 2 years young; and a maximum of 14 children in a group aged 2-3 years. However, the connection with overall quality and child development is not as strong as for child-staff ratio (Huntsman, 2008).

Professional support

216. Professionals experiencing little professional support from colleagues or the centre's management have been found to be less satisfied about their job and conduct their teaching or care giving tasks less well than those who are professionally supported (Chang et al., 2005; Ackerman, 2006). Professional support is most often expressed in opportunities for professional development supported and/or subsidised by the centre, regular staff meetings in which management listens to their staff members, and encouragement and consultation by peers (Ackerman, 2006).

Physical/material resources

217. The attendance or abundance of sufficient and appropriate material resources in a work environment affect the ability of the practitioner to conduct his or her work (NICHD, 2002; Huntsman, 2008). In classrooms with less physical resources, children were found to be more easily distracted, were less engaged in activities and practitioners provided less age-appropriate practices and behaviours (NICHD, 2002). The NICHD found a significant link between positive care giving behaviour and the physical characteristics of their environment, e.g. the instruments and materials available within the setting.

Workload

218. Galinsky (1988) set up a list of potential stressors that included the workload of ECEC practitioners. The workload of practitioners was based on the number of working hours, having a schedule that is compatible with family life and physical demands of the job. In comparing ECEC staff who work longer hours due to a heavier work load versus staff who work less hours, staff members who work longer

hours are less satisfied about their job and experienced more often stress. This impacts professionals' motivation to stay in their job and can lead to higher turn-over rates (Maslach and Pines, 1977).

Personal characteristics

219. Other potential predictors of practitioner's effectiveness are related to personal characteristics. Findings from a small, qualitative study in the U.S. indicates that pre-school teachers who stay in their job do so because the work is emotionally and ideologically rewarding (Murray, 2000). On the contrary, staff's mental health status can negatively affect child development. Literature has documented the highly negative impacts of depression on interactions with children. Practitioners were found to be less caring, less sensitive and less responsive to children when facing depression. Within classrooms, this led to problematic child behaviour such as yelling, fighting and uncooperativeness (Hamre and Pianta, 2004; Cummings et al., 2005; Kim-Cohen et al., 2005).

Implementation of effective professional development programmes and improving working conditions

220. Research has demonstrated that certain issues and barriers are preventing many practitioners working with young children from doing the best they can. The most common ones are listed below, followed by key success factors of implementation.

Perceived barriers

Restricted financial resources

221. Many people entering the ECEC workforce do not have access or support to obtain (further) professional development, particularly within higher education degree programmes. Even when early childhood education or child development degrees are available and required for certain roles, professionals may face barriers to formal education due to limited financial resources (Chang et al., 2005). The low wages do not provide ECEC practitioners with the financial capacity to upgrade their credentials by themselves (Ackerman, 2006). Because of the (often) low levels of funding, many ECEC centres have been found to have insufficient finances to be able to afford professional development possibilities for its staff (Chang et al., 2005). But centres, both in infant/toddler and preschool programmes that receive free and/or subsidised rent or materials have been found to be able to direct more of their (limited) financial resources towards staff, leading to lower staff turnover rates (Goelman et al., 2006).

No incentive to achieve higher qualifications or participate in training courses

222. When professionals do not have any incentives to achieve additional education, not many professionals will choose to do so. Relatively often, achieving higher qualifications does not bring along any positive effects for practitioners except for the increase in knowledge. When professionals are rewarded for their additional qualification or education, such as in a wage increase, more holidays or getting to accomplish additional interesting tasks, more professionals have been found to be willing to upgrade their level of education (Whitebook et al., 2009).

Insufficient time

223. Oftentimes, practitioners in the ECEC sector have a heavy work load with a large amount of working hours being involved directly with children and additional work time dedicated to other tasks (e.g. administration). Therefore, it is not easy for them to find time to 'escape' from their daily tasks and attend training courses, workshops or go to school (Galinsky, 1988).

Insufficient knowledge about appropriate curriculum content for professionals

224. What practitioners should learn through a curriculum is influenced by cultural contexts and how society envisions the child and the relevance of ECEC. This is an issue that deserves concentrated attention and discussion both within the field of educating practitioners and with practitioners on-the-job who are working directly with young children in collaboration with policy-makers. The content of curriculum for future practitioners should be developed depending on the goals of ECEC provision.

225. Research literature advocates three broad areas of knowledge – early childhood foundations, discipline specific curriculum content and working with families and diversity issues – that ECEC staff need to know in order to teach and develop young children effectively. Reflecting research-based evidence that early childhood education and child development coursework predicts positive interactions between professional and young children (Shonkoff and Philips, 2000), educational programmes should provide (future) practitioners with a foundation in early childhood educational topics (Burns et al., 2003; Lobman et al., n. d.). These topics include child development and learning theory as well as methods courses in both pedagogy and curricular approaches. Additional research is needed on the intensity, duration and other details of professional development that have the greatest impact on early childhood professionals' practice and quality (Olsen and Brunner, 1996).

Availability of (appropriate) training opportunities

226. In regions with low population densities, many professionals indicated that there are hardly any professional training possibilities for them because of the lack of training institutes or places. Training possibilities are often located in large cities, and practitioners working in remote areas often do not have time or the financial resources to travel to a training institute or school (Canning, 1989).

227. When training possibilities are available, they should be linked to staffs' experience levels and the current teaching and learning activities in their centres (Darling- Hammond & McLaughlin, 1996; Bowman et al., 2001). But many training opportunities may not be context- or experience-specific (Feiman-Nemser, 2001). Finding professional development that is experience-specific to individual professionals is often problematic.

Key success factors*Professional standards*

228. A framework with standards on the characteristics, tasks and responsibilities of professionals can provide coherence and guidance to both policy-makers and staff members. It can also bolster overall programme quality and lend structure to professional development systems. Comprehensive standards can extend beyond staff and personnel who work directly with children to encompass other early childhood professionals such as child care licensing and regulation staff and school administrators who may oversee an early childhood education programme.

229. When professional development standards are linked with impact and evaluation assessments, it can encourage high(er) levels of preparation and professional development among staff in all types of early childhood programmes since evaluations can point out where problems implementation occur. However, setting standards too low could jeopardise the efficacy of the programmes policy-makers are creating, while setting standards unnecessarily high can be costly and make it difficult to recruit adequate professionals (Early et al., 2006).

Management support

230. Support at management level to improve professional development and working conditions is key to successful implementation. Whenever the management board supports these goals, implementation can be implemented with less hurdles, and can even be furthered based upon the priority management gives to the topic (Ackerman, 2006).

Inter-professional collaboration and coordination

231. Implementing policies and practices to improve professional development and work conditions is hard to accomplish alone. Collaboration with others responsible for professional education, content area specialists and ECEC settings can lead to improved professional education and training, and improve staff effectiveness (Whitebook et al., 2009).

Conclusion

232. In sum, it has been found that initial education levels and opportunities and support for ongoing, on-the-job learning appear to be of critical importance in helping professionals become effective. On-the-job professional development is likely to be very effective if it includes assistance from a skilled and well-trained mentor or coach.

233. Additionally, the work environment can support or hinder staff's performance. Appropriate group sizes and ratios permit practitioners to establish relationships with the children in their care or educational environment. Compensation strongly affects teachers' willingness to enter and stay in the field. ECEC research, given the particular problems of low compensation and high turnover in the field, has also demonstrated that students of higher-paid teachers achieve better outcomes.

234. However, barriers in implementation have been found to be related to the amount of financial resources, incentives for professionals to increase their level of education, insufficient time to attend additional professional opportunities and insufficient knowledge about what future practitioners should learn during their initial education.

235. Setting up professional standards, collaboration and co-operation with other expert groups and stakeholders and increasing management support for staff development can foster the implementation of ensuring further professional development and improve work conditions.

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