Key Elements of Good Practice to Support the Learning and Development of Children from Birth to Three

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1. Introduction

For much of the 20th century, the cognitive and social capacities of very young children were severely underestimated (Nugent, 2015). Researchers, psychologists, linguists, neuroscientists and philosophers have revealed that babies are born knowing a lot; they learn more, feel more, create more, think more, care more and experience more than we could ever have anticipated (Gopnik, 2016; Kuhl, 2010; Murray, 2014). Brain and biological pathways in the prenatal period and in the first 1,000 days of life affect physical and mental health for the rest of our lives. Neuroscience has revealed that the synapses in a child's brain multiply 20-fold between birth and three years of age, a rate that is faster than at any other time in life (Gerhardt, 2005). This growth depends, in part, on the kind of experiences the baby receives. Babies are learning and developing from the first day of birth in every context in which they find themselves. What babies learn and how they develop in the early months and years of their lives is truly extraordinary. In contrast to the vulnerability and dependence of a new-born baby, a typically developing three-year-old child may be independently running, talking and feeding themselves. Such leaps of learning and development require nurturing and support by committed parents, carers and early childhood educators. In recognition of the importance of these earliest years the G20 Initiative for Early Childhood Development was launched (G20, 2018). The G20 comprises of twenty of the largest economies in the world. For the first time, in relation to early childhood education and care (ECEC), the G20 have emphasised the role of parents, families and early childhood educators, play, early stimulation, responsive care, health and nutrition, and the need for stronger financing streams and multi-sectoral collaboration.

The National *Síolta Aistear* Initiative (NSAI) seeks to establish the key elements of good practice to provide resources to support early childhood educators in enhancing the learning and development of children from birth to three years old. The NSAI was established to support the co-ordinated roll out of *Síolta* (Centre for Early Childhood Development and Education [CECDE], 2006) and *Aistear* (National Council for Curriculum and Assessment, 2009). This paper identifies the key elements of good practice, through a review of current international research literature, on which supports and resources for educators should be focused. The paper thus responds to the following three questions and is presented in that order:

- What are the key elements of good practice in supporting the learning and development of children from birth to three years as identified in current research literature?

- What challenges does the literature identify for educators in supporting the learning and development of children from birth to three years?
- What are the implications of the above for the provision of resources through NSAI?

The paper, therefore, is not intended to be a comprehensive overview of all research in the area. The implications centre on topics within the remit of the delivery of the NSAI.

2. Key Elements of Good Practice from Birth to Three

There is a dearth and fragmentation of research on professional practice with children from birth to three years. As a consequence, this paper focuses on three comprehensive international literature reviews on the impact of ECEC provision on the learning and development of children from birth to three (Melhuish et al., 2015) and evidence on what quality ECEC should look like for this age group (Dalli et al., 2011; Mathers et al., 2014), augmented by other credible sources. It is acknowledged that, the research evidence for children from birth to three in ECEC is limited in comparison to older age groups.

All three reviews converge on one point: the quality of children's experiences matter. Children's "daily experiences drive development" (Melhuish et al., 2015, p.83). High quality ECEC positively impacts on language, social and cognitive development, especially for those at risk of educational inequality. However, low quality may impact negatively and lead to deficits in learning and development (Dalli et al., 2011; Mathers et al., 2014; Melhuish et al., 2015; Penn, 2009). Dalli et al. (2011) cite evidence from translational research about the interaction between what very young children experience and their developing brains. Translational research takes research from disparate disciplines and integrates and applies the new knowledge acquired to policy and practice contexts. The key message is that repetition of both positive and negative emotional experiences impacts on the architecture of the brain and creates mental working models that ultimately lead to how children construct responses to habitual events. Prolonged negative experiences in the form of 'toxic stress' (stress where babies and toddlers have no control over their situation) is a risk factor to babies' and toddlers' mental health, immune system, brain development, cognitive functioning and emotional wellbeing. Certain circumstances must be met to provide high quality ECEC and capitalise on the benefits of ECEC. The approach to curriculum and pedagogy and the design of programmes appear to be vital (Leseman, 2009).

Children under three years of age have unique needs that are different from those of older children and therefore require specialised and different provision (Dalli et al., 2011; Mathers et al., 2014). This literature review reveals the quality characteristics of early childhood provision deemed essential for enhancing the development of children under three as outlined below (Child Development Council, n.d.; Dalli, et al., 2011; Fleer & Linke, 2016; Mathers et al., 2014; Melhuish et al., 2015; Working Group on Early Childhood Education and Care, 2014).

2.1 A specialised relational pedagogy: attuned, responsive, affectionate and available

It is acknowledged that pedagogy can be difficult to define for the specific nature of under-three-year-olds, for educators and policy makers alike. Such a definition requires a shift in thinking from the idea of pedagogy as 'teaching and learning' to 'learning and emotional nurturance'. This is partially because of the level of development that the youngest children have acquired, and partially because of the increased demands of bodily caregiving and the heightened levels of intimacy that such caregiving requires (Dalli et al., 2011). Dalli (2014) reports on the rise of research evidence in relation to pedagogy with babies in group-based settings, with key findings converging on the notion of a 'relational pedagogy'.

International research has demonstrated that the youngest children in ECEC settings need supportive, stable, warm relationships to promote secure attachments with caregivers, healthy and safe environments and learning experiences (Mathers et al., 2014; Melhuish et al., 2015). Relationships "are the means through which the feelings—and the realities—of safety, security and support and healthy development are achieved" (Fleer & Linke, 2016, p.3). Indeed, a concept called a 'neuro-relational approach' has emerged (Lebedeva, 2018) in recognition that experience, not simple maturation, changes the brain (neuro) and that all learning happens in the context of relationships (relational). In other words, the brain is an organ that is changed, in interactive and complex ways, by relational experiences with others. We know that for the very youngest children, forming secure attachments with their caregivers is critically important (Mathers et al., 2014). Up to the age of three years the brain is sensitive to and primed for intimate, communicative and affectionate attachments. Hence the idea of a "specialised relational pedagogy" is proposed (French, 2018, p. 201). The key interaction strategies that promote the development of attachment and positive infant mental health are outlined briefly here.

2.1.1 Attunement

According to Dalli et al., in the context of ECEC practice with children under two years of age, the dominant developmental concept referred to is intersubjectivity. This means the child's "ability to engage others in interpersonal communication" (2011, p.4). Intersubjective attunement implies that the child and educator are in synchrony with one another and that they are both on the same wavelength. Attunement involves being in harmony with a child through careful observation and tuning into their unique traits. Attunement is the foundation of responsiveness and emotion-regulation, which is critical for young children's brain development and learning.

2.1.2 Responsiveness and self-regulation

In a responsive relationship, the style of education and caregiving is interactive and reciprocal (two-way) where the child's contribution (a baby's cry, a toddler's question) is the basis of the engagement. Such relationships are developed through active and responsive educators, who support young children's attachments and notice the subtle cues from each child, including understanding their individual temperaments in everyday moments (Dalli et al., 2011). In other words, educators recognise signs of happiness and stress in children and take appropriate action to adapt to their needs. As stated earlier, the focus on avoiding stress in the very youngest children is particularly important.

Emotion-regulation is the term used to describe how babies and toddlers are supported to regulate their emotions when they are upset, stressed or are engaged in activities where there is a danger that they will become overwhelmed by their emotion. Self-regulation is a baby's ability to gain control of bodily functions, manage powerful emotions, and maintain focus and attention. The growth of self-regulation is a cornerstone of early childhood (Shonkoff & Phillips, 2000). Whitebread (n.d.) cites studies relating to what predicts later positive academic, emotional well-being, sociability, creativity and problem-solving outcomes in young children. Self-regulation in children from birth to seven years is a higher predictor of these positive outcomes than traditional psychological intelligence testing or the age at which children become literate (Whitebread, n.d.). Although babies are born with a range of "self-organising neurobehavioral capacities", they are largely dependent on their caregiver to help them to regulate their internal states (Axford et al., 2015, p.15). Babies learn to self-regulate their emotions when they are soothed by empathic educators. If a young child is not soothed, they internalise negative patterns and may not learn socially acceptable behaviours (Dalli, 2014).

Young children routinely experience moderate and short-lived stress from both internal (for example, hunger and fear) and external (for example, having injections) sources. For a baby, even small changes such as a nappy change can be stressful as everything is a new experience. The nature of this stress, combined with the input of the adult in helping the baby to moderate it, contributes to the child's

developing capacity for self-regulation. The secure attachment figure regulates (calms) the baby's shifting arousal levels, which in turn affects and serves to calm the baby's emotional states. If a sustained calm stage can be reached due to soothing, the baby develops self-regulation skills. The baby begins to learn how to self-soothe, and these skills form the building blocks of healthy and significant future relationships. The ability to self-regulate and be regulated is a prerequisite to the ability to form healthy attachments (Grebenik, 2008). This support of children's self-regulation takes place through reciprocal (mutual, back and forth) interactions with attachment figures (Tronick, 2007). These 'serve-and-return' dynamics in social interactions operate as a catalyst for learning (National Scientific Council on the Developing Child, 2005; Shonkoff, 2010).

2.1.3 Emotional and physical presence

To avoid stress (see further discussion on stress in the section on environments), children of this age need consistent and available care. Adults who are not emotionally available or responsive to children (who may locate themselves nearby but are not engaged in children's play) have a negative effect on children's experiences; their social interactions and cognitive activities are less complex (Lobman, 2006). In a study cited by Dalli et al., (2011) the idea of emotional presence was encapsulated in the idea of 'lingering lovingly' (White, 2009). Intersubjective interactions (and thus specialised relational pedagogy) rely on being there, truly *with* the child. Presence "refers to both a physical and emotional presence, active listening processes, and an ability to orient oneself towards the relationship with the child and the child's experience" (Dalli et al., 2011, p.4). Babies and toddlers thus feel appreciated as unique personalities.

2.1.4 Being an interesting companion

We know from the work of Trevarthen (2004) that our youngest children need interesting companions, who enhance their imagination and creativity. Companionable learning is seen as the central mechanism whereby well-being develops and connection to another human being is made (Roberts, 2010). Being an interesting companion with babies and toddlers involves: forming partnerships with them, being attentive (watching and listening), respecting their preferences (for tastes, toys, experiences, and people), looking at educator's actions from the child's viewpoint, respecting individual temperaments by matching the educator's response to the temperament of the child (for example, if the educator is energetic, to slow down the pace while dancing with a less active toddler). Being an interesting companion also involves being a 'play manager' and 'play enhancer' or 'playmate' (Singer et al., 2014).[1]

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[1] See also discussion on play-based curriculum.

In summary, pedagogy for babies and toddlers focusses on 'learning and emotional nurturance' rather than 'teaching and learning'. Very young children need to form warm, stable secure attachments with those who care for them. Lack of emotionally attuned, responsive caregiving constrains the youngest children's brain development and learning and their ability to regulate emotions. The key interaction strategies that promote the development of attachment and positive infant mental health are: attunement (being in harmony with the child); responsiveness (recognising emotional cues and taking action to alleviate stress, thus contributing to the child's ability to self-regulate); being emotionally and physically present and being an interesting and playful companion. The required specialised relational pedagogy may be achieved through the development of the key person approach.

2.2 Supporting attachments through a stable key person approach and continuity of care

The majority of babies form strong attachment to their primary caregivers, who are usually, but not always their parents. While it is accepted that reliable, sustained relationships within the family are important, the need for predictable and stable relationships in ECEC settings is acknowledged less frequently. The negative and disruptive impacts of abrupt changes in personnel for babies and toddlers, related to high educator turnover are too often disregarded (National Scientific Council on the Developing Child, 2009). One study reported an alarming number of people changing children's nappies over a period of time (Jackson and Forbes, 2015). This is to be avoided. 'Prolonged separations from familiar caregivers and repeated 'detaching' and 're-attaching' to people who matter" are emotionally distressing and can lead to enduring problems (National Scientific Council on the Developing Child, 2009, p.3). The same authors reveal that there is no scientific evidence to support the belief that a baby or toddler having to form numerous relationships with educators provides valuable learning opportunities for them.

Babies and toddlers are starting to make sense of the world. In their early stages in the ECEC setting it is important that they are exposed to a limited number of people. "Being handled by many different people—each with their different way of holding, soothing, talking to and changing the child's nappy…" impedes babies' sense-making (Fleer and Linke, 2016, p.9). Babies and toddlers need the stability of an enduring and personal relationship with a person who will recognise that they have special interests. They can only begin to develop preferences in close personal, daily interactions with someone who knows them well (Jackson & Forbes, 2015).

Reviews on the quality of ECEC consider ongoing consistent relationships and stability and continuity as core features of quality practice (Dalli et al., 201; Mathers et al., 2014; Melhuish et al., 2015). The need for a key person approach for the youngest children is underpinned by attachment theory (Ainsworth et al., 1978; Elfer, Goldschmied & Selleck, 2012). Assigning each child a key person in an ECEC setting is depicted in research as ….. "a desirable strategy with the potential of significant

benefits for maintaining synchronous and attuned relationships between children and their educators" (Dalli et al., 2011, p.80). The key person promotes attachment, and responsive and attuned, caring one-to-one relationships, discussed above, that serve as the foundation for subsequent language, social and emotional development enabling babies and toddlers to thrive. Furthermore, we know that secure relationships with key persons are beneficial for cognitive development (Shemmings & Shemmings, 2011).

Babies' and toddlers' security deepens as their key person develops a positive relationship with their family and comes to know the family's values, interests and wishes for their baby and toddler. Ultimately the key person provides security and stability for the child and family, and this is broadened to other educators when the baby has settled in well, enabling babies and toddlers to explore and flourish in group care. Key persons work in teams so that:

- A secondary key person is available when the primary key person is absent, giving the child and family another familiar and trusted person to rely on. This is planned for and discussed in advance with parents and children.

- Responsive care, interactions and relationships are consistent between children, educators and parents.
- There is an agreement to work to the children's rhythms not to the clock.

There is limited empirical research which has proven the importance of the key person approach (Horms et al., 2018); however, there is firm scientific evidence on the importance of attachment figures in a young child's life (Mathers et al., 2014). Ideally, a child has the same key person until age three, which provides continuity of care and spares them the trauma of leaving someone to whom they are securely attached and having to adjust all over again to someone who does not know them (Horms et al., 2018). This process is called the looping system and there are a number of ways to organise this system in an early childhood setting (see Appendix 1). Stability is important for healthy development, which provides the underpinnings for all other areas of development. The looping system ensures that educators are fully in tune with babies' developing needs and can focus on the stage the child is at, as opposed to the demands of the activities in a room potentially geared for older

children. Supports are available on the *Aistear Síolta* Practice Guide for the key person approach. However, the key person approach is not mandated here as yet.

In summary, the pedagogical practice of supporting stable relationships with very young children is manifested through the key person approach, providing continuity of care. A key person is assigned to, and has special responsibility for, a small number of children and helps each child build a special bond of belonging in the ECEC setting. Ideally, children up to three years of age should have the same key person who engages with parents and in all transitions and intimate bodily care (see below), with the benefit of a secondary key person. An important benefit of the key person approach is the strengthening of the relationship between settings and families and supporting families' involvement. This, in itself, can have potential benefits for babies and toddlers.

2.3 Individualised routines

The key person builds the attachment relationship with the baby or toddler. This is achieved by supporting them in the initial and very sensitive transition from home to ECEC, and from then on at the beginning (arrival) and end (departure) of each day and ensuring all handling of the child and any transitions within the daily routine are sensitively planned, following the child's individualised cues (French, 2018). The following figures gives some indication of the volume of transitions the youngest children are likely to experience in a single day.

Figure 1 Transitions babies and toddlers may experience throughout the daily routine
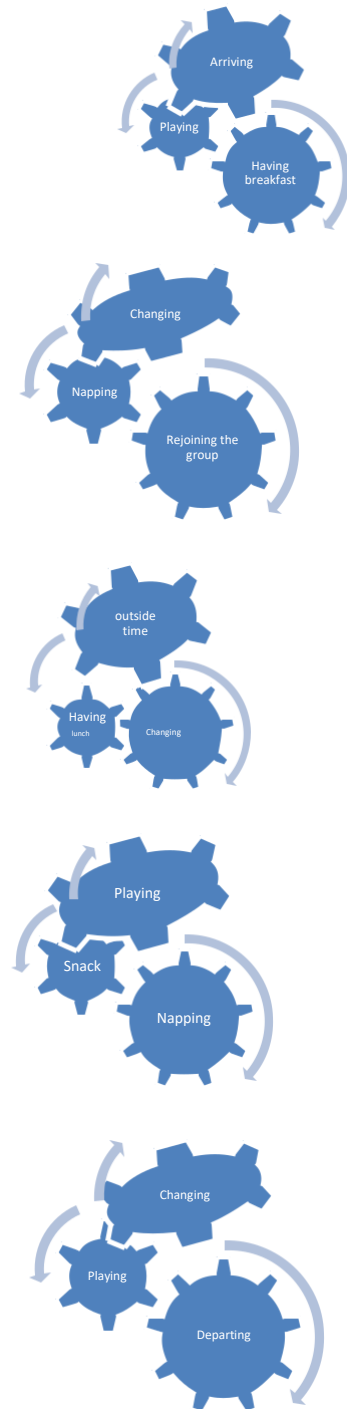
These elements of the daily routine are occasions for the development of attachments and rich learning opportunities. The key person eases the transitions for the baby by helping to introduce new experiences and people, and helping the baby to cope with change, when entering the setting every day, and moving through the daily routines.

Some of the routines involve intimate bodily care (feeding, nappy changing, being put to bed and picked up after waking up, washing hands). These intimate moments can create opportunities for intersubjective attunement and joint attention in which shared meanings can develop, assisted by conversation (Dalli et al., 2011). However, studies report that these routine experiences are often conducted without any conversation between the educator and child, and for toddlers their initiated play gets interrupted (Degotardi, 2010; Goouch & Powell, 2012). When caregivers spoke to children, they were mostly directive and terse, telling children what to do, and did not respond to their questions. Whilst interactions appeared to increase during unstructured times of the daily schedule, the routine times lacked conversation and were done *to* rather than *with* the child (Goouch & Powell, 2012). Children learn very quickly that they have no say in what is happening, no power or control over the situation; they are recipients of actions without participation.

Children need those around them to follow their lead and focus on them as people (not just the task). The difference between task-based care and a specialised relational pedagogy in practice, in those daily intimate care routines, is illustrated in the following table (expanded from Fleer & Linke, 2016, by French, 2018, p.65).

Table 1 Task based versus specialised relational pedagogy

Task-based care	Relationship-based care
Related to getting the task done quickly (e.g. briskly changing nappy, or feed baby)	Relating to the whole child, not just the task – seeing opportunities for learning and communication, e.g. narrating the experience for the baby, using the nappy changing experiences to offer choice – 'Would you like to hold the powder or the tissues?' singing songs, nursery rhymes and playing nursery.
Adult routine (e.g. going by the setting's schedule)	Infant rhythm and needs-based, e.g. gently placing the baby in their cot when they indicate that they are tired and feeding when they indicate they are hungry.
Do what has to be done (e.g. going through the tasks without engaging the baby, propping the baby up at playtime, putting outdoor clothes on without explaining)	Stopping, looking, listening and thinking about what it means and feels like for the baby first, before any actions with the baby, e.g. if the baby has to have a nappy changed, think what it would like to have an adult (sometimes an unfamiliar one) pick you up and change your clothes, without explanation.
Doing things *to* the baby (e.g. wiping their face with a cloth after feeding)	Doing things *with* the baby, e.g. offering the baby the cloth to respectfully wipe their own face, if not accepted - gently, unhurriedly wipe their face while explaining what is happening.
Focus on the task	Focus on doing things in the relationship with the baby, e.g. talking through everything that is happening, pointing things out to the baby and seeing the situation from the babies' point of view.

In summary, the key person builds attachments with the children through the initial, sensitive transitions from home to the setting and home again; and throughout the many transitions during the daily routine. The routines should be individualised and centred on the rhythms of the baby and toddler. The specialised relational pedagogy required for babies and toddlers involves meeting those care needs and emotional demands of babies and toddlers in a predictable, consistent, calm and loving manner throughout the daily routine.

2.4 Family involvement

There is consensus in the literature on the importance of the participation of parents in ECEC settings. Penn (2009, p. 57) cites the original European Commission's Childcare Network's Quality Targets in Services for Young Children (1998), which states:

> *"Parents are collaborators and participants in early years services. As such they have a right to give and receive information and the right to express their views. The decision making processes should be fully participative, involving parents, all staff, and when possible, children."*

The more recent report from the Working Group on Early Childhood Education and Care equally identifies that "parents are the most important partners and their participation is essential" (European Commission, 2014, p.9). Babies and toddlers in Ireland come from a variety of family backgrounds. Background can refer to an individual's ethnicity, culture, religion and language of origin, in addition to social, economic and family status. High quality programmes incorporate practices that reflect the values and beliefs of the families and the cultures of their communities (Dalli et al., 2011). Culture refers to the ethnic identity, language and traditions which every one of us has. Culture includes education, class, food and eating habits, family attitudes to child rearing, division of family roles according to gender or age. It involves a sense of belonging, a shared identity and understanding. Cultures are neither superior nor inferior to each other. Culture is dynamic and evolves for individuals, families and communities over time. There is a need for educators to be enabled "to engage and support children/families with diverse needs and backgrounds" (Mathers et al., 2014, p.25); and educators "need specialist training to work across diverse cultures and communities" (Dalli et al., 2011, p. 154). In their work with families, educators respect differences and strive to become more culturally competent.

There are three important dimensions of effective engagement with parents:

- taking account of parents' priorities, preferences and cultural difference in all aspects of planning and implementing the curriculum;

- ensuring that procedures are in place in the setting for regular and continual two way communication between educators and families and finally,

- educators noticing and responding to signs of stress in the family or other challenges to supporting children's learning and development (Mathers et al., 2014).

A potential fourth dimension is that of the parents viewing the early childhood educator as a professional with knowledge and expertise in the care and education of babies and toddlers. Educators should welcome parents into the setting, use the child's home language whenever possible, and in addition to everyday cultural competency, organise special events that include the child's family members (French, 2018).

Quality ECEC settings support families by inviting parental involvement and "see themselves as working in tandem with families" (Dalli et al., 2011, p.154). Intervention may need to be active in supporting positive parenting practices in the home as well as modelling positive interactions at the setting. Research on populations who experience adverse life circumstances such as: poverty, large household size, low maternal education, father absence, high maternal depression, and high life stress clearly demonstrates that high quality early intervention programmes act as a buffer against these damaging effects. Parents benefit from the practical support they receive through their child's attendance at an early childhood programme: their children's learning and language made the parents more responsive to the child's bids for attention at home, parents play more and read more to their babies and toddlers and provided a more appropriate home-learning environment (Dalli et al., 2011).

In summary, parents are the first educators of their children, with duties and rights to actively participate in their child's learning and development. Respect-based partnership with parents (and carers) is key, which means deeply engaging with parents and in practices that promote diversity and inclusion. This involves sharing of information, skills, decision-making, responsibility and accountability.

2.5 Low-stress-facilitating learning environments that support physical movement and play

Young children learn through continuously exploring and interacting within their physical space, including the surrounding sounds. Play and play full experiences are critical to such explorations and central to children's interactions with people and the environment. A well-planned, carefully organised space provides the basis of professional practice. However, it is what happens in those environments that truly determines the quality of the experience (Touhill, 2017). The richest environments for supporting very young children's learning and development are those that promote positive interactions and relationships and "educators' intentional provision of careful and responsive challenges" (Westwell, 2016, p.23).

Given what we know about 'toxic stress' mentioned previously, the environment should be low-stress through relationships that support 'adaptive coping' and actively avoid toxic stress or are able to buffer children against toxic stress (Shonkoff, 2010). Adaptive coping refers to coping skills which are constructive or adaptive to a stressful situation, in other words, strategies that reduce stress; are healthy and get to the root of the source of stress. In the early months of life, babies have a very limited capacity to regulate their emotional states. When they start crawling, walking, and running toddlers are able to apply adaptive coping and regulate themselves by approaching or retreating from a potentially stressful situation such as a noisy toy (Berk, 2012).

2.5.1. Guiding principles for the organisation of the environment

There is a myth that 'stimulating' environments enhance brain development. Having stimulating wall displays, experiences, and equipment available is not sufficient. If the materials are provided without purpose, they may constitute over-stimulation (Westwell, 2016). Indeed, noisy environments can be stressful for very young children (Dalli et al., 2011) and over-whelming for some children with additional needs (Mathers et al., 2014). The organisation of the environment is critical. Typically, indoor environments should include a block area, book corner, art area and an area for socio-dramatic play. Touhill (2017, pp. 10-16) offers guiding principles for the organisation of spaces for all age groups which includes:

- using furniture to divide the room into smaller cosy areas;

- allocating enough space to each area;

- creating clear pathways;

- avoiding using the walls and tall furniture to locate all areas – that is, bringing an area to the centre of the room;

- creating a sense of order with clearly accessible material, stored and simply labelled with photos – to support the find-use-return system;

- making use of incidental spaces – adding a mirror to the back of a cupboard;

- getting the balance right:

    - providing for active and passive play, quiet and noisy play, play for small and large groups and individuals, and play with open and closed materials;

    - providing sturdy objects to support learning to stand and walk;

    - choices about where and how the children will play and by offering a range of accessible materials – less choice may be offered to the younger children with material rotated occasionally (see section on play for further discussion on materials);

- finally, Touhill advises a working arrangement that is guided only by the children's use of the space and then maintaining a consistent and predicable environment to facilitate children's' deeper levels of learning.

In addition, the specific characteristics of babies and toddlers need to be considered. Small, cosy spaces that cater for small groups may work better for very young children. Soft furnishings and lighting can provide a calm and reassuring atmosphere. Babies spend a lot of their time at ground level; seeing what they see and feel should influence the environment. Cushions, mats and floor coverings generally need to be aesthetically and sensually pleasing, and not just washable (Touhill, 2017). Babies and toddlers need safe spaces for uninterrupted sleeping, for comfort and feeding, and spaces to interact one-on-one with individual educators (Melhuish et al., 2015). Babies and toddlers also need "intimate spaces which promote positive and individual relationships, routines and communication" (Mathers et al., 2014, p. 46). Environments must be well-ventilated with plenty of natural light. There should be a natural flow between feeding, resting, bodily care areas and the outdoors. It is important to remember that arriving and departing are major events for very small children. Therefore, an area (space permitting) which provides for parents and family members to prepare for parting and greeting and to store children's paraphernalia and special comfort items can be enormously supportive for children, parents and educators (French, 2018).

2.5.2. The importance of providing for physical movement

In addition to experiencing physical movement indoors, babies and toddlers must experience outdoor play daily and have opportunities to explore nature with supportive adults who engage as partners in play. "There is growing recognition that movement and physical activity are fundamental to young children's health and development" (Mathers et al., 2014, p. 38). In the UK context, guidelines suggest that babies should be active several times daily and that toddlers should experience three hours of physical activity each day. However, research shows that this is rarely achieved. "International data suggest that only just over half of children aged between two and six are physically active for one hour or more per day" (ibid). In Ireland, a quarter of our three-year-olds are overweight or obese (Economic & Social Research Institute & Trinity, 2018). Good nutrition also plays a role; however, "there is clearly an urgent need to ensure that policy and practice encourage children's physical development" (Mathers et al., 2014, p. 38).

In summary, the richest environments to support very young children's learning and development are those that promote positive interactions and relationships in low stress environments. The physical learning environment should be organised literally from the babies and toddler's perspective, acknowledging the amount of time they spend on the ground, and should include enriching resources appropriate to the context of the developing child; comfortable spaces to meet routine care needs (such as feeding, changing and sleeping); space and resources which promote physical activity indoors and critically outdoors. Babies and toddlers should be active in everything they do – movement experiences should be integrated in all parts of the day indoors and outdoors, as should play.

2.6 Play-based curriculum and assessment

The literature provides clear evidence that under-threes learn most effectively through "play-based activities and routines which allow children to take the lead in their own learning (Mathers et al., 2014, p.37). Play is recognised in the fields of health and paediatrics as well as ECEC.

> *"Play is essential to the social, emotional, cognitive and physical development wellbeing of children, beginning in early childhood. It is a natural tool for children to develop resiliency as they learn to co-operate, overcome challenges and negotiate with others, Play also allows children to be creative." (Milteer, Ginsberg & Mulligan, 2012, p.204)*

Mathers et al. (2014) cite two types of play considered to be particularly effective for the youngest children to make choices and take the lead; first floor-based play which supports babies and toddlers to explore objects and experiences moving to second, representational symbolic play in the second year of life. A play-based curriculum for a baby and toddler is based upon a sound understanding of child development and quality pedagogical practices, while taking into account the individual needs, interests and temperaments of each child. This requires "structural conditions that support the educator in context" (qualifications, low adult; child ratios, group size) and relies on "constantly evolving supportive connections" between educators and babies, educators and educators, "elements of the organisation of the centre, and the centre's philosophy and leadership style" (Dalli et al., 2011, p.3).

2.6.1 Babies and toddlers are agentic, active learners

Sociocultural research emphasises the idea of baby and toddler agency. Agency is the ability of child to act on the world, "through the expression of mind and body in reciprocal acts" (Dalli et al., 2011, p.73). Agency is manifested when young children use voice and gesture to communicate with others knowing they will make an effect. Such communications form the basis of intersubjectivity. Young children actively 'learn by doing', using their senses to feel, touch, hear, taste, see and generally explore and work with a variety of objects and materials around them, including natural materials. Through these sensory experiences, children develop the dispositions, skills, knowledge, and understanding, attitudes, and values that will help them to grow as confident and competent learners. Babies and toddlers need a lot of opportunity, and critically time, for hands-on experimentation and exploration (Stonehouse, 2012). They need to try out new physical skills like sitting, eating, climbing and experience the satisfaction of being able to achieve new things (for example, the baby who has discovered how to crawl, or the toddler who has worked out how to get around holding on to furniture). They also need to play with others, singing a nursery rhyme or rolling a ball to another baby (Stonehouse, 2012).

2.6.2 The role of the educator in babies' and toddlers' play

As in all of the discussions in this paper so far, we come back to the role of the educator in babies' and toddlers' play; some similar themes emerge mainly the importance of attachment and presence. In one study, attachment relationships are seen *as* the curriculum for under two- year-olds (Raikes, 1993 cited in Dalli et al., 2011). Research highlights the important role of skilled educators in enabling children to explore their environments and engage in different forms of play and to understand when "intervention will enhance learning and when it may hinder it" (Mathers et al., 2014, p. 37). In a Dutch study of 116 two and three year old children, in 24 ECEC settings, "the continuous proximity of the

teacher had the greatest impact on the level of play engagement, while the teacher's walking around and only brief contacts with the children had a negative impact" (Singer et al., 2014, p. 1233). In the context of play engagement and what is appropriate, there is development in very young children's abilities in "sustained attention and distractability" (Singer et al., 2014, p.1234). Babies and toddlers' attention is highly influenced by novelty of objects and events and by processes of habituation (becoming used to the novelty). They need educators to introduce them to moderately novel play experiences. "Later on a second attention system develops slowly with increasing cognitive and self-regulatory skills. Self-generated and goal orientated schemes and tasks become major incentives for sustained, focused attention" (Singer et al., 2014, p.1235).

Babies benefit most from play with a caring adult who provides opportunities for every aspect of development "language, agency, social development, early numeracy, physical development, culture and family traditions and enjoyment" (Fleer & Linke, 2016, p.15). Babies particularly enjoy 'hide and seek' games and 'give and take' games. Toddlers have a need for child-initiated play and peer play but still need an educator nearby. The play engagement of children from three years slowly becomes less vulnerable to external influences and distractions. In line with what has already been discussed in this paper, reciprocal and responsive interactions between educators and children yielded positive results for play engagement. The physical availability of the educator is particularly important for very young children because of the complexity of ECEC settings with so much movement (educators, children and occasionally parents walking around).

2.6.3. Play materials

There is an important connection between how space and carefully selected sensory motor play materials are arranged and the quality of learning for the babies using them (American Academy of Pediatrics, 2011). Within their environment, babies and toddlers need materials and experiences selected primarily for individual interests and abilities rather than one-size-fits-all group play. Play materials should be chosen with a view to the baby and toddler seeing, hearing, communicating and manipulating; in addition to developing movement ability and providing varied opportunities for the child to explore. Treasure baskets, heuristic play experiences and natural open-ended materials best support babies' and toddlers' play. The facilitating function of the environment may be of particular relevance for children at risk of educational inequality, as the setting may offer access to materials and learning experiences not offered in the home (Melhuish et al., 2015). Dalli et al. (2011, p.80) recommend "an environment rich in things to explore, opportunities for physical movement, dance, song, rhyme, storytelling and creative activities". However, the quality of the attention young children receive may be more important than the provision of educational tools (Trevarthen et al., 2003, cited in Melhuish et al., 2015).

2.6.4 Curriculum and assessment

The definition of curriculum in *Aistear* refers "to all the experiences, formal and informal, planned and unplanned in the indoor and outdoor environment, which contribute to children's learning and development" (NCCA, 2009, p.54). In the context of curriculum, and as discussed earlier, babies and toddlers experience a significant volume of transitions throughout the day, from one element of the routine to the next. These routines form part of the curriculum and offer "excellent opportunities for babies to explore, communicate and use emerging skills" (Stonehouse, 2012, p.11).

Síolta Standard 8 Planning and Evaluation states that, "Enriching and informing all aspects of practice within the setting requires cycles of observation, planning, action and evaluation, undertaken on a regular basis" (CECDE, 2006). Assessment is defined "as the on-going process of collecting, documenting, reflecting on and using information to develop rich portraits of children as learners in order to support and enhance their future learning" (NCCA, 2009, p.72). Assessment provides early years educators with information on which to base their pedagogical and curriculum plans. Critically, the assessment process must be discussed and negotiated with team members and parents. Educators use the assessment information to make informed judgements about children's individual progress and strengths; make reports/feedback to others; reflect critically on the curriculum and review provision, including the environment. Most importantly, assessment information is used to *deeply* understand how babies and toddlers think, what they can do, their dispositions and their interests in order to plan future enjoyable play-based learning experiences, and to make learning interesting and successful (French, 2018).

Understanding how children learn and develop is an important foundation for good assessment which benefits both children and adults. Assessment helps adults to 'see' what children are thinking and feeling, what they understand and can do through watching, listening, talking with, and empathising with babies. Learning may be documented through written narratives/anecdotes, learning stories, photographs, audio tapes and film (with appropriate permissions) (French, 2018).

In summary, the curriculum is everything that the child experiences. Educators plan for each day, individualising play-based learning experiences, materials and engage in specialised relational pedagogy throughout the routines of each baby and toddler, in partnership with parents and colleagues. Educators ensure their physical and emotional presence and a sensitivity to group dynamics. Observation and discussion among educators and families provides deeper understanding of each child and a basis for documenting, assessing progress and planning for learning and development.

2.7 Attending to communication and emerging language within holistic development

It is acknowledged that it is important to focus on the holistic development of children; which has been discussed in preceding sections. However, a dimension of quality in ECEC consistently identified in the literature for children under-three-years is the "support for children's developing communication skills through play and routines" (Mathers et al., 2014, p.38). Studies which cross disciplines from neuroscience, psychology, machine learning and education have further confirmed that language is developmentally linked with cognition and social processes (Dalli, 2014). In learning about language "babies appear to use the three social skills of imitation, shared attention and empathetic understanding" (Dalli, 2014, p.3).

Non-verbal conversations enable babies to develop their sense of self, their well-being and their attention, as well as providing a precursor to later language (Mathers et al., 2014, p.37). As children learn to use language, pedagogical practices that support their development are informal conversations, songs and rhymes with movements, shared reading and through the use of narrative during daily routines (Mathers et al., 2014). Narrative is particularly important and involves the retelling and recalling of children's experiences. It allows children to give meaning to the range of their experiences, helps develop tools for thinking and supports children's appreciation of their own achievements.

Emerging language begins with conversations between educators and children. Educators are laying the foundation for language and reading when they talk aloud to babies and toddlers throughout the day, repeating back their babbling, asking children questions, reading them books and singing them songs. Educators promote language development when they use simple words and keep a balance between listening and talking with the baby and toddler and when they provide an environment rich with age-appropriate and language diverse books and interesting pictures and photos to talk about. In this way, educators support children's language-learning journey in the context of the diversity of languages, including English and Gaeilge.

In summary, language is developmentally linked with cognition and social processes. Educators should focus on enhancing children's communication and emerging language through the pedagogical skills of narrating, informal conversations, songs, rhymes and reading books in the context of the diversity of languages, including English and Gaeilge.

2.8 Knowledgeable and committed staff in early education and care (birth to three)

An enabler to high quality provision for under-two-year-olds is considered to be degree level staff (Dalli et al, 2011). Furthermore, specialised professional development opportunities (after initial qualification), formal and informal professional development and supervision while working in ECEC all impact positively on staff's ability to enhance children's learning and development (Dalli, et al., 2011; Mathers et al., 2014; Melhuish et al., 2015).

In addition to in-practice professional development supports, the pre-service education of ECEC staff is of critical concern (Melhuish et al., 2015). Indeed, in Ireland's State of the Nation's Children's report 2016 (Department of Children and Youth Affairs, 2016) the only measure of quality in ECEC is predicated on the number of staff in receipt of higher capitation in ECEC settings, that is, those with a degree in ECEC[2]. The literature acknowledges the importance of the quality of nurturance that babies receive, and that the higher the level of qualification, the better the experience for the young child (Melhuish *et al.*, 2015). Sadly, there is no higher capitation for staff working with babies and toddlers in Ireland. Neither is there any effort to professionalise the sector for those who work with this age group, from birth to two years, eight months (PLÉ, 2018), leaving the very youngest children likely to be left in the care of the least qualified personnel. However, it must also be acknowledged that the expectation of professionalism is not matched in Ireland by the pay, work conditions, or esteem that is typically held in other professions.

The last decade's findings about early brain development imply that educators for children under three years need to study early education and care (rather than pre-primary or primary school education). In a national survey of all ECEC degree programmes in the US, it was revealed that only 49% who claimed to include the birth to age three range in their degree programme required at least one infant/toddler course (Hyson, Horm & Winston, 2012). In one study in New Zealand, it was found that there was no research on the pedagogy required for working with this age group and it was recommended that there was a need for a more specialised focus on "pedagogy with under-one and under-two-year-olds in preservice teacher-education programmes and professional development" (Dalli et al., 2011, p.6). It can be extrapolated that the same point applies to under-three-year-olds here.

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2 For more information see https://affordablechildcare.ie/the-ecce-free-pre-school-scheme

In terms of the content of continued professional development and education programmes it is recognised that, in general, early childhood educators require a sound knowledge base "about the purpose and aims" of ECEC, "about children's rights, democracy, about the importance of addressing diversity, equality, and social justice" (Urban, Cardini, & Flórez Romero, 2018, p. 6). What is known about the unique learning and development of children from birth to three should be addressed (Dalli et al., 2011). Educators should be supported to know how to use daily routines to build attachments with very young children, how to enhance children's learning and development through conversation, interaction and responsive relationships and how to plan play - full learning experiences (Hyson, Horm & Winston, 2012).

Educators need to self-evaluate and critically reflect on their practice in "highly complex, unpredictable, constantly changing and diverse contexts" (Urban, Robson & Scacchi, 2017, p.7). Self-evaluation and awareness of diversity is especially important in order to meet the multiple needs of increasingly diverse children and families (Melhuish et al., 2015). With children, educators should: engage in "transformative practice of mutual dependence and respect, co-construction and shared meaning making between human beings" (Urban, 2008, p.150); be clear about what they do and why they do it; work as early childhood advocates and adhere to ethical standards (Weissman & Hendrick, 2014).

Early childhood educators need "to become effective pedagogical leaders who understand the learning and development needs of children and can enhance and extend learning opportunities" (Nutbrown, 2012, p. 3). Early childhood educators need to continually develop their knowledge, values, practices and understandings to be confident in their own practice and in engaging with parents as well as other professionals, such as Speech and Language Therapists, Inspectors, Public Health Nurses and Social Workers. They also need knowledge in relation to early childhood in the local, regional, national and international context (Urban et al., 2017).

In summary, the higher the level of qualification of an educator, the better the experience of a very young child, therefore the pre-service education of ECEC staff is of critical concern. The content of professional development and education programmes should be relevant to the age group from birth to three and include knowledge of: children's rights; how children learn and develop; how to use daily routines to build attachments with very young children; emotional engagement through responsive interaction strategies; planning for babies' and toddlers' learning; awareness of diversity and working with families with multiple needs; and self-evaluation and critical reflection through film-stimulated reflective discussions (French, 2014), all supported by on-site mentorship in a team approach.

Critically, educators should be aware of ECEC in national and international contexts and be skilled in the specialised relational pedagogy required for working with babies and toddlers.

3. Challenges for Educators in Supporting Learning and Development

Some of the barriers to quality pedagogy which have been identified in the literature include (Dalli et al., 2011, p.6):

- Structural (external) conditions that undermine or do not cooperate to support process elements of quality deriving from educators' knowledge. This includes the whole package of variables such as educator training, experience, and involvement, along with the organisation of environments and philosophies of practice.

- Poor working conditions and low status, as well as inadequate adult-child ratios, which have a significant impact on educators' ability to demonstrate specialised relational pedagogy with babies and toddlers.

- Inconsistent care by one or a small number of adults interferes with children's ability to experience sensitive, responsive care that attends to their changing needs, communication and language.

Whilst there is insufficient empirical research in Ireland on the specific challenges being experienced by the sector, these challenges have resonance here for those working in ECEC, and potentially impact on their ability to support the learning and development of the children in their care. The increasing expectations that rest on their shoulders are not matched by commensurate designated yearly salary scales, conditions of employment, or the status that educators richly deserve (Moloney, 2010). There is limited support for early childhood professionals to advance their qualifications. The sector is lacking a national registration system and body, to set professional standards and to promote the work of professionals in ECEC, as enjoyed by those working in primary education (the Teaching Council) or social care (CORU Health & Social Care Professionals Council).

3.1 A specialised relational pedagogy: attuned responsive affectionate and available

Much of what has been discussed in this paper is about responsiveness – the ability for educators to pick up on babies' cues, engage in shared attention and meaning making and respond in 'serve and return' interactions appropriately. Even with knowledge of how to engage in specialised relational pedagogy, the literature recognises that simply knowing about the need to establish intersubjectivity is not sufficient (Dalli et al., 2011). There are challenges "in generating shared meaning between teachers and very young children [which] also arise from the environmental conditions" where educators work (Dalli et al., 2011, p.81). The implementation of schedules, rosters and routines may serve to interrupt the intimacy and specialised relational pedagogy that is required. Educators need to be physically present and emotionally available, and not engaged in cleaning, walking around, or supervising all other children (Singer et al, 2014).

We also know that educators' ideologies and attitudes, for example beliefs on babies' and toddlers' capabilities, serve to limit or enable what educators see and hear, influencing educators' abilities to pick up on the very subtle cues that very young children elicit (Dalli et al., 2011). For example, in one study educators believed that babies were more capable in directing their physical and cognitive learning but were dependent on adults for social and emotional learning. The educators' beliefs impacted on their practices (Salamon & Harrison, 2015).

3.2 Supporting attachments through stable key persons and continuity of care

In this paper, the key person approach is recommended. However, this approach is not without its challenges. High staff turnover militates against its implementation. In the year 2017-2018, the rate for staff turnover in Ireland was 24.7% on average. This makes providing continuity of care a challenge. Given illness, holiday leave, maternity leave, part-time contracts, and the routines within the setting, there are times when the key person is absent (Dalli et al., 2011). Other challenges include transitions between home and the setting, or between rooms within the setting and the regularity of children's attendance patterns (Mathers et al., 2014). It is understood that the practice of using the key person approach is complex, implemented in many different ways and for varying lengths of time (Horms et al, 2018).

3.3 Lack of knowledge and isolation

A real challenge is that early childhood educators may not have the sufficient education and professional development to engage in the specialised relational pedagogy required to work with babies and toddlers. In Ireland, currently, a Level Five (Quality and Qualifications Ireland) is the minimum qualification required. Research points to the isolation that some baby and toddler educators feel: "Findings indicate that those working with babies frequently feel isolated and neglected in relation to support for their practice, that the practitioners had a very low sense of self-worth in relation to their work, low self-confidence and an inability or a reluctance to articulate their own understandings of their practice" (Gooch & Powell, 2012, p.78). Research suggests that there is a link between confidence, professional knowledge and engagement and the ability to engage in specialised communications with babies (French, 2018).

4. Implications for the Provision of Resources through NSAI

The implications, from the above findings, in general are clear: babies and toddlers are learners from birth; sensitive responsive caregiving and emotionally attuned interactions in low stress environments "open up their brain for learning" (Dalli, 2014, p.2). Achieving intersubjective attunement and sensitive responsive care in group-based settings requires educator engagement in specialised relational pedagogy. This kind of pedagogy is predicated on a supportive infrastructure within the immediate ECEC setting, as well as attention to a range of environmental and structural factors and the broader policy level. The following implications for the NSAI are presented in order of importance.

4.1 General provision for specialised relational pedagogy

- In order to support educators to engage in the specialised relational pedagogy required to work with babies and toddlers, a programme of continued professional development (CPD) could be developed.

- Resources for the *Aistear Síolta Practice Guide* could be developed to support the CPD such as tip-sheets and video examples of practice, building on the existing framework.

- Ideally, any professional development programme to be combined with onsite coaching and mentoring. As part of this process, the use of critical reflection of (responsive) practice through film-stimulated reflective discussions is recommended.

4.2 Provide materials on pedagogical strategies to promote secure attachment and play

- Materials that promote specific pedagogical strategies for 'secure' attachment organisation and positive infant mental health to be developed and included in the CPD programme and resources.

  Components could include: attunement, being an interesting playful companion with babies and toddlers; supporting babies' and toddler's emotion-regulation through interactions; and, ultimately, responsive communication with babies and toddlers. These are all strategies to support the development of attachment and positive infant mental health.

- It is advised that formal professional development be combined with workplace coaching and mentoring to support professionals working with children and their families (Centre for Effective Services, 2014; Dalli et al., 2011, French, 2014; Mathers et al., 2014). Furthermore, the use of film-stimulated reflective discussions form an inherent and powerful part of successful programmes that aim to focus on educator child interactions in order to enhance practice (Chapman et al., 2015). Film-stimulated reflective discussions can support educators to critically reflect in and on their practice and articulate elements of their interaction strategies that traditional educational methods are unlikely to reveal (French, 2018). The advantage of onsite filming is that the complexity of the context can be revealed.

4.3 Provide materials to support individualised routines

- The specialised relational pedagogy required for babies and toddlers involves meeting children's care needs and emotional demands in a calm, predicable, consistent and loving manner. Bodily care routines are seen as opportunities for learning, are individualised to each child's rhythm and managed in a calm unhurried, play full and interactive way, with the baby given time and space to eat at their own pace and to be held and physically moved with respect. Respect is important and is demonstrated in the way the educator talks to the young child about what is happening, and how they offer respectful and gentle touch.

- Materials that emphasize the importance of individualised care routines within the group care context could be developed.

4.4 Providing materials to enable a low-stress-facilitating environment

- Resources could be developed on the role of active learning through play, supporting very young children's agency, and the educators' role in providing for a low stress facilitating environment

  that supports floor-based exploratory play and symbolic play, and physical movement with

  appropriate play resources.

4.5 Providing materials to enable play-based curriculum and assessment

- Resources could be developed which:

  - translate what the curriculum looks like for babies and toddlers;

  - identify the opportunities that exist for playful learning within the daily routine;

  - clarify what are we looking at;

  - offer guidance on how to document very young children's learning.

The rationale for such resources is that it may be difficult for educators to see the learning that babies exhibit, for example the realisation that when they use 'bah' consistently in relation to a toy, they have associated that the toy has a title and they are meaningfully communicating about it. There is very significant learning happening continually, that is not always obvious in the magic of the everyday moments of a young child's life.

4.6 Provide materials to support the key person approach

- When understood and implemented as a team approach, key person systems result in continuity of care for the child and the family thus assisting the caregiving adults in the complex role of

  sharing the care of very young children. Resources to promote the development of the key

  person approach in all settings could be provided.

4.7 Provide materials for transitions with the diversity of families

- Critical to the key person approach is engagement with families. Resources to enable staff to work across diverse communities and "to engage and support children/families with diverse needs and backgrounds" (Mathers et al., 2014, p.25) could be further developed to include transitions and engagement with families of babies and toddlers. Equally, attention should be paid to the content of developments in relation to various cultures. For example, the audit currently being undertaken on Traveller culture and identity could be included in the resources.

4.8 Provide opportunities for educators to meet and talk

- Providing caregivers with opportunities to talk to others working in the field appears to be a simple way to start professional development in an effort to improve ECEC quality (Goouch & Powell, 2012). These professional dialogues should serve to enhance babies' and toddlers' learning and development.

5. Conclusion

One of the defining features of the three literature reviews that form the basis of this paper (Dalli et al., 2011; Mathers et al., 2014; Melhuish et al., 2015) is the dearth of research on what is happening for babies and toddlers in ECEC settings. If we are serious about wanting to make recommendations for policy and practice for this age group in Ireland, we need to understand the lived experiences of babies and toddlers in these settings. That is, researchers need to examine what individual children experience as part of the overall assessment of quality. The Department of Children and Youth Affairs (2018) report that 3,542 children from birth to one year and 30,060 from 13 months to 36 months attend early childhood settings in Ireland. Shonkoff (2010) argues that both provision and research are necessary since there is much more yet to be discovered about the impact of experience on the developing brain but no time to waste in the life of a young child. In this regard the First 5: A Whole-of-Government Strategy for Babies, Young Children and their Families 2019-2028 is very welcome, with its commitment to develop an effective early childhood system partially through research, data, monitoring and evaluation.

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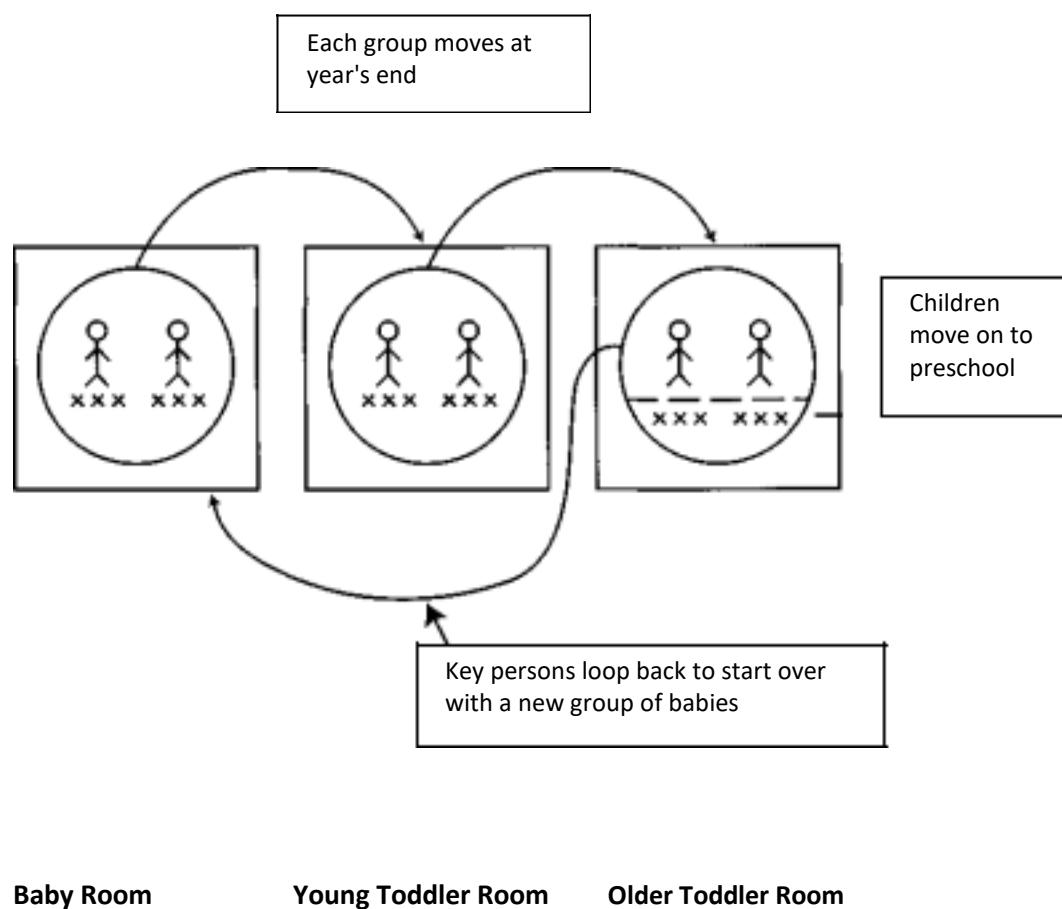infant-teacher attachment. *Early Childhood Research Quarterly*, 8, 309–325.

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Appendix 1 Continuity of care: Looping system

Option 1: Multiroom with Looping

Three 2-person teams, 3 rooms, 3-year looping

Each group moves at year's end

Children move on to preschool

Key persons loop back to start over with a new group of babies

**Baby Room**   **Young Toddler Room**   **Older Toddler Room**

This setting has a "baby room," a "young toddler room," and an "older toddler room." Each room has a two key person team with six young children of about the same age. Each year, as the children in a given room grow older, they and their key people move on to the next room (for example, the former young toddlers move on to the older toddler room with their two key people). At the same time, children who have been in the older toddler room move on to pre-school, and their key person team then loops back to the baby room to begin caring for an incoming group of babies. This method ensures that the educator is fully in tune with the babies' developmental needs and can respond appropriately. The fact that the baby moves to the young toddler room does not mean that s/he is forced to do activities way beyond their stage of development.

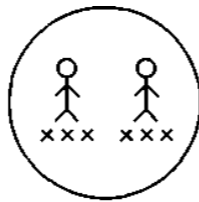*Adapted from Post and Hohmann (2000, p. 297) with permission*

Option 2: Multiroom without Looping

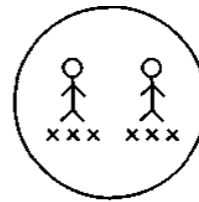Three 2-person teams, 3 rooms, each team stays in the same room for their children's 3-year cycle
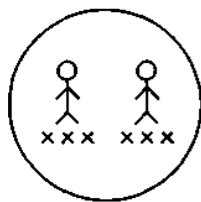
ROOM 1   **ROOM 2**   **ROOM 3**

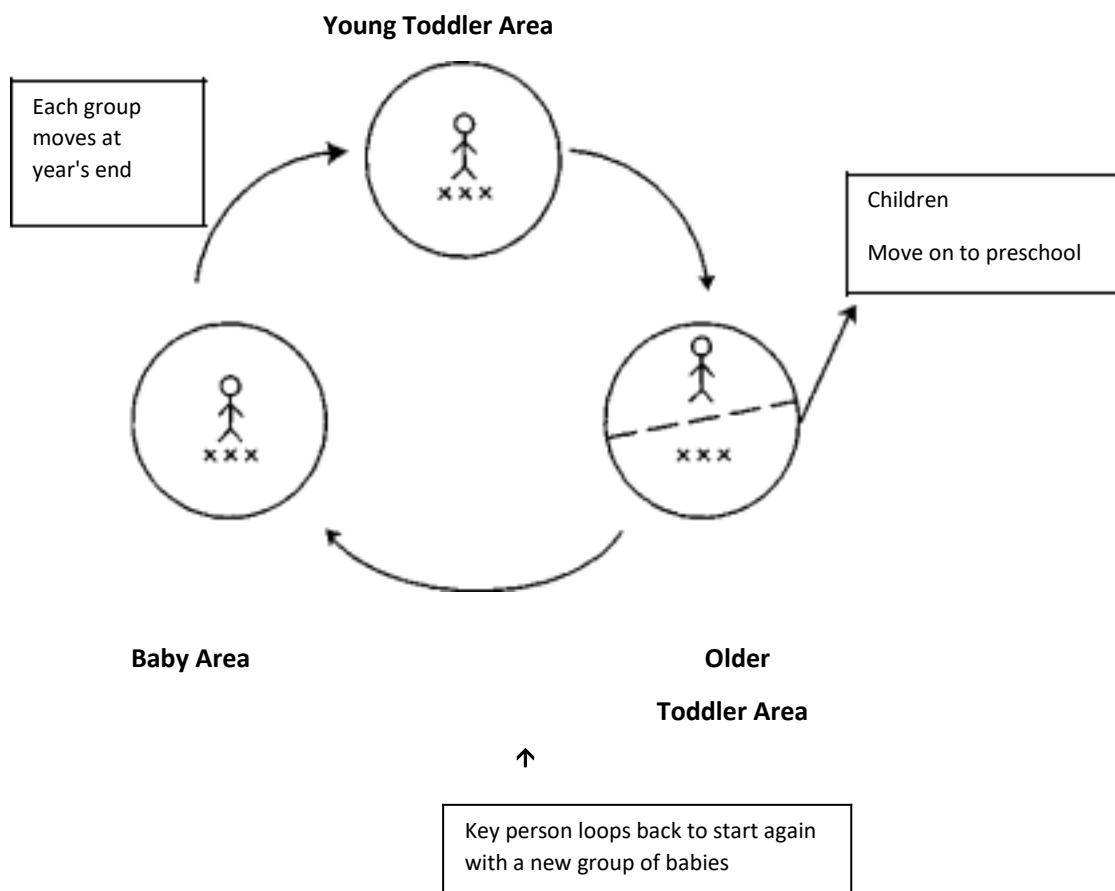| Year 1: 6 babies	Year 1: 6 young toddlers	Year 1: 6 older toddlers
Year 2: Children become young toddlers	Year 2: Children become older toddlers	Year 2: Start-over with babies, in same room
Year 3: Children become older toddlers	Year 3: Start-over with babies, in same room	
Year 4: Start-over with babies in same Room		

This service has, at any given time, three separate rooms—one for babies, one for young toddlers, and one for older toddlers—but the two key people team in each room stays in place with their six (possibly up to eight children) from year to year. Thus, as their children grow from babies to young toddlers and then to older toddlers, the key people arrange and adapt their room to support children's developing abilities, and the room changes in designation from one year to the next: It is the service's "baby room" one year, its "young toddler room" the next, and its "older toddler room" the next. Again, this method ensures that the educator is fully in tune with the babies' developmental needs and can

respond appropriately. The fact that the baby moves to the young toddler room does not mean that s/he is forced to do activities way beyond their stage of development.

Adapted from Post and Hohmann (2000, p. 298) with permission

Option 3: Shared, Subdivided Space with Looping

One 3-person team, shared space with separate areas for 3 different ages, 3-year looping

Young Toddler Area

Each group moves at year's end

Children

Move on to preschool

Baby Area

Older

Toddler Area

Key person loops back to start again with a new group of babies

This service has one large space that is subdivided into three areas, each adapted for a different age group. (Additional kitchen and nappy changing/bathroom facilities are available to be shared by all three age groups. Also, the age-adapted play areas are situated so children may see and even at times interact with those in other age-groups.) A team of three key people rotates in using the three age-adapted areas. One cares for her three babies in the "baby area"; another cares for her three young toddlers in the "young toddler area"; and another cares for her three older toddlers in the "older toddler area." Each key person moves along to the "next-stage" area with her children as they reach that stage. The key person whose children move on to pre-school loops back to begin with an incoming group of babies in the area adapted for babies.

Adapted from Post and Hohmann (2000, p. 299) with permission