

Supporting the Implementation of the Foundation Phase through Effective Professional Development

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ABSTRACT

There is a growing evidence base linked to high quality and effective practice which supports and enhances children's outcomes (socio-emotional and cognitive development) in Early Childhood Education and Care (ECEC, 0–8 year olds). It includes the recognition of important aspects of quality, its measurement and the characteristics of effective educators. More specifically, new understandings about the practices and pedagogies which make a real difference to children's outcomes are emerging, including the importance of relational and intentional pedagogies and the educators' engagement with and promotion of sustained shared thinking (SST) within their classrooms/settings. The extant literature, together with a growing but still developing discourse around effective professional development (PD), could usefully inform future directions within the sector in Wales, and support the successful implementation of the Foundation Phase (3–7 year olds).

Key words: professional development, Foundation Phase, relational and intentional pedagogy, sustained shared thinking, environment rating scales.

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Contextual background to professional development

There is consistent, robust evidence, both nationally and internationally, demonstrating the importance of young children's early education (OECD, 2012). Early experiences lay the foundation for all learning (Allen, 2011; Melhuish et al., 2010, 2015; Sylva et al., 2004; Sylva et al., 2014) and have enduring effects (Heckman and Wax, 2004). High quality early childhood education and care (ECEC) can reduce inequalities linked to parental background and socio-economic status (Manning et al., 2010; West et al., 2010) and have the most profound impact on economic growth and prosperity generally (EIU, 2012; Field, 2010; Ho et al., 2010; Melhuish, 2004).

Further, the quality of the early Home Learning Environment (HLE), which can be successfully supported through ECEC, is a powerful predictor of future education and career success (Siraj-Blatchford et al., 2002; Siraj and Mayo, 2014; Sylva et al., 2010). Early education can offer advantages to children and families in two intergenerational ways: through both the education and care offered to the children within the school or setting and also through the support given to parents/carers with the early HLE. Given the right conditions, the effect of attending high quality ECEC on the developmental progress of children can be greater than the effect of social disadvantage (Geddes et al., 2010).

The Welsh Government introduced the Foundation Phase (FP) as part of a strategic reform designed to 'get the best for Wales'; more specifically to raise basic skills (of numeracy and literacy), 'close the gap' of disadvantage, promote the language and traditions of Wales and ultimately to build strong economically thriving communities that embrace multiculturalism (NAfW, 2001). For these aspirations to be realised the FP, including its principles and practices, needs to be implemented with integrity and understanding across the country. The FP workforce needs to know how to support and extend children's outcomes through the successful implementation of the FP (Waters, 2016).

Reviews of the FP (e.g. Maynard et al., 2013; Siraj-Blatchford et al., 2006; Siraj and Kingston, 2014) suggest that it can be associated with positive children's outcomes (both in terms of their socio-emotional and cognitive development). However, concerns about how consistently the pedagogies and practices embedded within the FP are understood and implemented across Wales remain (Waters, 2016). Siraj and Kingston (2014) estimated that approximately one-fifth of schools and settings delivering the FP were achieving effective implementation. Taylor et al.

(2015) suggested that while there were some schools implementing the FP well, there was no evidence of a reduction in inequalities in attainment across Wales, between children from families of different socio-economic status, at the end of Key Stage 2. All indicated that further investment and support were essential.

Recommendations, following recent reviews, were complex and multileveled, including recommendations at country, consortia, strategic lead, head teacher, other leaders within the maintained and non-maintained sectors, class teacher, practitioner, advisers, inspectors and training institution levels. They recognised the need for sustained improvements across the country, and the need to consider implementation at all levels within the provision and across all stakeholders. In line with more recent understandings of effective ECEC, for example UNESCO (2014), they also argued that the professional development and motivation of the staff working with the children and families was fundamental to the success of the FP. Recommendations echoed the recent UNESCO (2015) report, where governments were urged to attend to and focus on quality if they wished to achieve equitable and high quality education for all. They endorsed strong investment in the educators: ‘to enhance the status, morale and professionalism of teachers ... To attract and retain good teachers, policy-makers need to improve teacher education, deploy teachers more fairly, provide incentives in the form of appropriate salaries, and create attractive career paths’ (UNESCO, 2015: 196).

The Welsh Government, responding to advice and recognising the complexity of ensuring that the FP is implemented well so that it successfully supports and enhances children’s learning and development, has set up an expert group tasked with developing: ‘a strategic action plan which will put in place a long-term approach to develop consistently good and effective practice across all settings and schools in order for the Foundation Phase to reach its full potential’ (Welsh Government, 2016: 3). The Welsh Foundation Phase expert group has identified four strategic areas for development:

1. The curriculum and assessment
2. Professional learning
3. Narrowing gaps in achievement
4. Regulation and inspection (Welsh Government, 2016: 10).

This article considers contemporary research and evidence linked to professional learning or professional development (PD) in ECEC, including what educators need to know and do to be effective in supporting and enhancing young children's learning outcomes. The rationale for focusing on PD is: first, PD has the potential to impact on all four strategic areas; second, it can usefully inform, extend and build upon existing professional learning and qualifications, including teaching degrees and other child-related qualifications (Early et al., 2007); third, research associated with PD is giving new insights into what works and new understandings about the skills, knowledge and dispositions effective educators possess; fourthly, effective PD has been linked to improved classroom quality (Burchinal et al., 2002) and children's learning (Pianta, 2012); and finally, current literature points to PD as possibly the most powerful vehicle for improving teaching and learning in ECEC (Schachter, 2015).

PD can be categorised according to five types (Zaslow and Martinez-Beck, 2006):

- formal education (e.g. foundation degrees, degrees);
- accreditation (e.g. vocational qualifications and apprenticeships);
- coaching and/or consultative interactions (in-setting training usually involving observation and feedback on practice – like lesson-study);
- specialised, on-the-job in-service training (e.g. workshops, conferences and training designed to support specific aspects of practice); and
- communities of practice or collegial study groups (e.g. networks or groups of colleagues meeting together with the express aim of sharing and improving practice).

While it is recognized that these are not mutually exclusive categories, they support consideration of the whole range of possible PD and have served to inform and support analysis of recent research considering the effectiveness of different types of PD (e.g. Zaslow et al., 2010). There is a growing body of research considering the merits of different types of PD; however, it is not possible within the confines of this article to engage extensively with all of the extant literature. Indeed, the recognition of PD's potential to improve practice is widespread and has led to a recent escalation of interest and research in this area in ECEC. Siraj and Kingston are currently involved in a number of randomized controlled trials in Australia (including the Quality Interactions Study (QIS 2015–16) and Fostering Effective Early Learning (FEEL 2016–17) both for the state

government in New South Wales, Australia) while Siraj, in England, is leading an Education Endowment Funded project Using Research tools to improve Language in the Early Years (URLEY).

The main focus of this article is, however, the content of effective PD, drawn from the quality improvement literature and recent understandings about the skills, knowledge and dispositions of effective early educators. Such understandings cross all types of PD and so are relevant to the five types of PD outlined above.

Quality and its measurement

The concept of quality in ECEC is a multi-dimensional construct. It encompasses the physical, caring and educational environments, which, in turn, are impacted upon by aspects such as staff training and qualification levels, child-adult ratios, groupings and group sizes, staff turnover and interpersonal relationships. Research considering quality and effective practice in ECEC increasingly supports the view that it is highly dependent upon a well-trained and qualified workforce. Many studies have recognised that the quality of ECEC does not depend so much on physical resources, such as buildings and schools, but on the quality of the educators who work with the children and families (Abbott and Rodger, 1994; Melhuish et al., 2015). Cooke and Lawton (2008) reported that improving the quality of ECEC and learning outcomes for children requires a highly skilled workforce – one that offers reflective practice, sound decision making and personalised care.

Measures of quality

When measuring quality in ECEC provision, researchers have typically used observational rating scales. These support the objectivity of observations and allow comparisons to be made across studies. The most widely used scales are linked to the family of early childhood Environment Rating Scales (ERS), some of which are highlighted in Table 1.

ERS have an international reputation for (i) measuring important aspects of quality that relate to children's outcomes, (ii) the standardisation processes they have undergone, and (iii) their associated reliability and validity ratings (concurrent and predictive). Example items from ECERS-E

Table 1. Commonly used Environment Rating Scales (ERS) when assessing the quality of early years' provision (adapted from Siraj and Kingston, 2015: 30)

Tools for measuring quality	Brief descriptions of the aspects of quality covered	For use in the following provision
Early Childhood Environment Rating Scales (ECERS-R) (Harms et al., 2004)	Includes structural and some process aspects with an emphasis on global aspects of quality: space and furnishings; personal care routines; language-reasoning; activities; interaction; programme structure; parents and staff.	Centre-based Early Childhood Education and Care (ECEC) for children aged 2½ to 5
Early Childhood Environment Rating Scale – Extension (ECERS-E) (Sylva et al., 2010)	Considers the curriculum and educational pedagogy in the following areas: language and literacy; maths and number; science and the environment; diversity (planning for and meeting the needs of individuals and groups).	Centre-based ECEC for children aged 2½ to 5
Classroom Assessment Scoring System (CLASS) (Hamre et al., 2009)	Considers process quality under the following headings: positive climate; negative climate; teacher sensitivity; regard for child perspective; behaviour guidance; facilitation of learning and development; quality of feedback; language modelling.	Centre-based ECEC and schools. There are different versions for different age ranges.
Sustained Shared Thinking and Emotional Wellbeing (SSTEW) Scale (Siraj et al., 2015)	Considers aspects of process quality which support emotional well-being and high quality interactions. Specific areas of pedagogy and practice covered are: building trust, confidence and independence; social and emotional well-being; supporting and extending language and communication; supporting learning and critical thinking; assessing learning and language	Family and centre-based ECEC for children aged 2 to 5.

and the SSTEWS Scale can be found in the appendices. ERS are included here to illustrate one possible way of measuring quality in ECEC. They are used in many well-known early effectiveness studies, including the EPPSE study (Sylva et al., 2014) but can also be used for audit or self-assessment purposes by ECEC staff. These particular ERS were designed to support observers in making objective judgements about the quality of practice in centre-based ECEC provision and the early part of school.

The number of ERS available has developed over time as new insight into what constitutes effective practice has evolved. The most recently developed of the ERS, the SSTEWS Scale, looks particularly at the role of the educator in promoting and supporting sustained shared thinking and emotional well-being (SSTEWS), both of which are increasingly being recognised as essential to children's learning and development (Siraj-Blatchford et al., 2002; Melhuish et al., 2015).

Quality and the Foundation Phase

Melhuish et al. (2015) and Siraj and Kingston (2015) summarised evidence from numerous studies which considered the elements of high quality that impacted on children's outcomes, including the longitudinal EPPSE study in England (Sylva et al., 2004; Sylva et al., 2014). They concluded that the following characteristics were particularly important for enhancing children's development:

1. Adult-child interactions that are warm, sensitive, responsive, and readily available;
2. Well-trained staff who are child-centred and committed to their work;
3. A developmentally appropriate curriculum with a focus on education;
4. Ratios and group sizes that support staff to interact appropriately with children;
5. Supervision that maintains consistency in the quality of care;
6. Staff development that supports quality and ensures continuity and stability;
7. Facilities that are safe and sanitary and accessible to parents; and
8. Partnerships with families, which include sharing educational goals and supporting the early HLE.

The FP includes many aspects of pedagogy and practice seen as fundamental to young children's learning and directly promotes many of the above characteristics. It emphasises the importance of play-based and experiential learning and recognises the importance of communication and language (including early literacy, numeracy and Welsh) together with personal and social development, well-being and cultural diversity, knowledge and understanding of the world, physical and creative development. It focuses on enhancing individual children's learning, supporting inclusion, and promoting thoughtful curriculum decision-making. It fosters positive partnerships with homes and acknowledges 'parents/carers as the children's first educators' (DES, 2015: 4)

While PD designed for the ECEC workforce has been consistently identified as important if enhancing children's outcomes is desired, the evidence base for what should be included in such PD and how it should be structured is still developing. Associations between PD and the quality of practice are still emerging; educators with child-related degrees are typically more responsive to the children, more supportive of their language development (Howes, 1997), socialisation and emotional development (Holloway and Reichhart-Erickson, 1988). Fukkink and Lont (2007) in their (1980–2005) meta-review of the effectiveness of training and PD concluded that there was ample evidence which demonstrated that providing qualifications and PD for educators (building capacity) improved children's learning and well-being. They stated:

The training of caregivers is a cornerstone for quality in early care. Caregivers with high educational levels provide better personal care ... are more sensitive ... are more involved with children ... and have more knowledge of developmentally appropriate practice ... Furthermore, more educated early educators offer richer learning experiences ... provide more language stimulation ... and stimulate the social and physical skills of children more often than other educators. (Fukkink and Lont, 2007: 294)

However, they also suggested the need for caution, noting that it was the educators' ability to create high quality pedagogic environments that made the difference for the children and not the qualifications per se (Fukkink and Lont, 2007). What was critical to the children's learning and development were the adults' sensitivity and responsiveness, the quality of their interactions with the children and their ability to extend and scaffold children's thinking and learning (OECD, 2012).

What skills, knowledge and dispositions do effective educators possess?

While reviewing the literature on important skills and traits of staff in facilitating high quality services and children's outcomes in ECEC, OECD (2012: 146) produced the following list:

- good understanding of child development and learning
- ability to develop children's perspectives
- ability to praise, comfort, question and be responsive to children
- leadership skills, problem solving and development of targeted lesson plans, and
- good vocabulary and an ability to elicit children's ideas.

This list includes many of the attributes commonly associated with effective practice in ECEC and links well to the PD literature. Educators who received PD which included aspects of child development were found to be more able to develop a child's perspective (Sommer et al., 2010) and promote and support learning through play and exploration (Samuelsson and Carlsson, 2008). Typically, they were better at problem solving and creating developmentally appropriate learning experiences for the children in their care, while simultaneously supporting children's oral and early literacy development (NIEER, 2004). Educators improved support of literacy was associated with their own improved vocabulary, following studying for a degree. Educators with higher, specialized education were also more likely to interact with children in a more positive way – offering praise, encouragement and comfort, or asking questions which showed an interest in children's activities (Howes et al., 2003). Even so, Hyson et al. (2009) stressed that there was no guarantee that any level of specialised education and training would lead to greater effectiveness.

The Researching Effective Pedagogy in the Early Years (REPEY) study (Siraj-Blatchford et al., 2003) provided a complementary, more detailed list of educators' characteristics associated with effective practice and better child outcomes to the OECD list. According to the REPEY study, an effective educator:

- views children's cognitive development and social-emotional development as complementary, and does not prioritise one over the other;
- combines good curriculum and child development knowledge with knowledge and understanding of how children learn;

- shows strong leadership and has long-serving staff (three years plus): this applies even in private day-care settings where staff turnover is normally highest;
- provides a strong educational focus with higher qualified staff (trained teachers) working alongside, and supporting, less qualified staff;
- provides children with a mixture of educator initiated group work as well as learning through freely chosen play;
- provides adult-led/guided interactions which involve ‘sustained shared thinking’ and open-ended questioning to extend children’s thinking, during both adult-led group times and freely chosen play;
- involves parents/carers in their children’s learning, including sharing educational aims;
- provides both formative and summative feedback: giving ongoing feedback to children during activities and through regular reporting and discussions with parents/carers about their child’s progress;
- ensures behaviour policies focus on behaviour for learning; including viewing conflict and challenge as opportunities for learning (e.g. staff have an agreed process to support children in rationalising and talking through their conflicts); and
- provides differentiated learning opportunities which meet the needs of particular individuals and groups of children e.g. bilingual, those with special educational needs, girls, boys, and so on.

This second list illustrates more clearly the importance of the adult’s pedagogical approach within the classroom and many of the more recent, promising PD studies have taken this understanding forward (Fukkink and Lont, 2007; Zaslow et al., 2010). Increasingly, research has shown that significant predictors of enhanced children’s outcomes in ECEC relate to the educators’ role: specifically, the quality of adult-child and child-child interactions they promote and support within their classrooms (Siraj-Blatchford et al., 2002). Children’s interactions with educators and their peers, more than any other programme feature, are seen as determining what the children learn and how they feel about learning (Driscoll et al., 2011; Epstein, 2014; National Research Council, 2001; Pianta, 2012).

OECD (2012) stated that staff qualifications, initial education and continued professional development could contribute to enhancing:

pedagogical quality, which is, ultimately, highly associated with better child outcomes. It is not the qualification per se that has the impact on child outcomes but the ability of better qualified staff members to create a high quality pedagogic

environment. Key elements of high quality are the ways in which staff involve children, stimulate interaction within and between children, and use diverse scaffolding strategies. (OECD, 2012: 143)

The REPEY research identified the importance of high quality interactions that supported and extended children's thinking (sustained shared thinking – SST). SST occurs when 'two or more individuals "work together" in an intellectual way to solve a problem, clarify a concept, evaluate an activity, extend a narrative, etc. Both parties must contribute to the thinking, and it must develop and extend the understanding' (Siraj-Blatchford et al., 2002: 8). The key to SST is the 'active engagement of practitioners in children's learning and extending thinking' (Siraj et al., 2015: 6).

SST includes the successful support of children's communication, language, thinking and learning. This requires highly skilled staff who are knowledgeable in: children's learning; assessing, monitoring and supporting children's socio-emotional, linguistic and cognitive development; and ensuring children are safe, stimulated and ready to learn and think deeply. In order for ECEC educators to possess such knowledge and skills, they require teaching by tutors who are familiar with the concepts, can model them well, and are able to apply theoretical bases to real-life practice (Kingston and Siraj, forthcoming).

More recently, other international research has endorsed the view that SST is a key aspect of practice if children's learning and development is to be enhanced by attendance at ECEC provision (Katz, 2008; Pianta, 2012; Sylva et al., 2014), and it has become widely acknowledged in many curricula across the world. SST's influence is reflected powerfully in the development of the Australian Early Years Learning Framework (EYLF) (Department of Education, 2009) and the English Early Years Foundation Stage (EYFS) (Early Education, 2012). Even so, the practices associated with SST are still relatively poorly understood and practised (Siraj-Blatchford et al., 2002; Sylva et al., 2004).

Principles and practices underlying SST

Although the term SST is widely known in the literature, it is still not well practised. The SSTEWS Scale (see Siraj et al., 2015) was developed to support and clarify the pedagogy and practices which underlie SST as well as

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inform improvement processes. The lists of characteristics produced both by OECD (2012) and the REPEY Study (Siraj-Blatchford et al., 2003) outline the foundational pedagogies and practices which support the development of SST. These characteristics are then built upon by the educators' use of relational and intentional pedagogies. Interestingly, the terms intentional and relational pedagogies appear in the action points outlined under professional learning in the new Foundation Phase action plan (Welsh Government, 2016).

The term SST was developed from the evidence base of best practice (Siraj-Blatchford et al., 2002) and its promotion (e.g. through the development of the SSTEWS Scale) rests on the premise that the children and families attending ECEC are entitled to support from highly effective child-centred educators, working to support and enhance the children's learning outcomes. They do this through the relationships they develop and the interactions they engage in and support, with and between the children and their families/carers.

Relational pedagogy

Relational pedagogy is evident in the educator's beliefs and actions when they build strong, child-centred, respectful and reciprocal relationships with the children, their families/carers and their colleagues within and beyond their school/setting. They establish individual relationships, which are empowering and nurturing. With the children, they support the healthy development of self-concepts, self-worth and self-image and encourage them to become independent, autonomous and self-regulated learners, who see learning as fun and under their own control (Kingston and Siraj, forthcoming). Effective educators work hard to establish and maintain these warm, trusting relationships as these are seen as fundamental to learning (Howes et al., 2008; Pianta et al., 2007). They get to know the children well, including their preferred activities, interests and learning styles, so that they can enthuse, support curiosity for learning and ensure that the challenge is appropriate for each child; supporting and scaffolding children's learning within the child's zone of proximal development (ZPD) (Vygotsky, 1978). They prioritise supportive relationships with the children's parents/carers, developing partnerships that include sharing learning intentions, progression and activities designed to support the children's learning at home. They work collaboratively with other

members of staff, valuing their contribution to the children's learning and ensuring consistency and progression in learning. They recognise that young children need to feel safe, comfortable, interested and stimulated in order to learn (Melhuish, 2004) and to be in a position to think deeply and to extend that thinking.

Intentional pedagogy

The intentional educator acts with knowledge and purpose to ensure that the young children in their care acquire the knowledge, skills and dispositions they need to succeed in education and later life. Key understandings here include the importance of supporting and enhancing the children's developing self-regulation and metacognitive skills as well as specific skills and concepts linked to other aspects of development (including language) such as emergent literacy, mathematics, science and exploration. They understand the fundamental importance of talk, adult-child and child-child interactions, promoting and supporting interactions (both verbal and non-verbal), which extend thinking. Where effective practice is evident, high quality interactions linked to children's interests and designed to support learning and thinking can be seen throughout the day (Berlinger, 2009; Siraj-Blatchford et al., 2003; Siraj et al., 2015).

Effective educators avoid overly structured environments where learning is seen as totally reliant upon adult direction and there is little experiential learning or play. They also avoid totally unstructured learning environments, where children play with little or no adult support for most of their time. Effective educators engage in adult-guided, experiential and playful activities and provide stimulating, challenging environments designed to support children's play, exploration, curiosity and extend their thinking. During 'free' play the educators sensitively intervene, joining the children's play where appropriate (DCSF, 2009). As such, interactions between the adults and children are not confined to adult-guided activities, but also occur during child-initiated/guided activities (free play) in order to extend and scaffold their learning (Siraj-Blatchford et al., 2002).

Where relational and intentional pedagogy is evident, the educators scaffold learning through encouragement, modelling, questioning and challenging the children. They group children to support interactions and learning. They observe, assess and plan for learning at whole group, small group and individual levels. They support the children's collaboration,

perseverance, concentration, problem solving, curiosity, memory, empathy, thinking, planning, reflection and self-regulation. They are respectful of the children's own knowledge and what they bring to any interaction; both the educators and children contribute to the construction of shared meanings, knowledge and skills. Siraj-Blatchford et al. (2002) described effective educators in the REPEY study: effective pedagogues model appropriate language, values and practices, encourage socio-dramatic play, praise, encourage, ask questions and interact verbally with children. Excellent settings tended to achieve an equal balance between teacher-led and child-initiated interactions, play and activities.

Effective educators skilfully combine positive relationships with meaningful learning experiences. They integrate explicit instruction with sensitive warm interactions, and provide responsive, individualised feedback and intentional engagement – while maintaining a setting that is orderly and predictable, but not overly structured or formal (Howes and Tsao, 2012).

Effective educators, who engage in SST, forge strong, secure relationships and are thoughtful, purposeful and plan for learning. They possess a wide-ranging knowledge about how children learn and develop; they employ a repertoire of different teaching and learning strategies; and they are responsive to and make use of specific content knowledge relevant to children's learning in order to provide meaningful activities and opportunities for the children (Pianta, 2012; Epstein, 2014; Siraj et al., 2015; Kingston and Siraj, forthcoming).

Current PD

While qualifications focused on ECEC have, generally, been found to support quality practice, there has not, to date, been a comprehensive analysis of how the content of such qualifications match the characteristics of effective educators or indeed whether they prepare educators to engage in practices such as SST.

Howes and Tsao (2012) suggest that the lack of an established pathway for early childhood educators' preparation is a major issue, which contributes to the international dearth of effective educators in this sector. They report little standardisation of content across degrees (both initial teacher training and specific ECEC degrees); as a result, degree qualifications are weak predictors of effective practice (Early et al., 2007). Additionally,

the lack of correspondence between formal qualifications and effective practice is linked to young children spending relatively small proportions of their days in learning experiences – and an even smaller proportion of their time working with an educator (Chien et al., 2010; Phillips et al., 2009).

The importance of educators' knowledge of theory has been well documented (for example, see Stephen, 2012). Stephen suggested that theoretical understandings of children's learning and development were often marginalised within – and limited to – qualifications, and were often restricted to initial qualifications. As a result, many practitioners were unable to answer 'why' questions in relation to their practice – and, therefore, often acted more as 'care providers' than as 'teachers' (Stephen and Brown, 2004).

Siraj and Kingston (2015), while undertaking a review of the ECEC workforce in Scotland, concluded that some qualifications were more focused on some aspects of knowledge, such as child development, than others – even when comparing qualifications developed specifically for ECEC. This inconsistency of content is unlikely to be unique to Scotland; it reflects ongoing concerns within the ECEC context in many parts of the world (OECD, 2012).

Similar concerns over the rigour and consistency of ECEC qualifications and PD have been reported internationally (for example Pramling-Samuelsson and Fler, 2009). Elliott, (2006) reported a need for good initial staff preparation and greater consistency across initial professional preparation programmes. Fukkink and Lont (2007) suggested there was also a need for high quality ongoing PD following initial qualifications, as educators who attended incomplete programmes of study as well as well-trained educators/teachers were likely to benefit from updating and ensuring that the effects of their initial courses of study did not 'fade away'. Given the current inconsistencies across PD and the growing body of research into 'what works' within the sector further clarification and updating linked to the evidence base may be useful. OECD (2012) pointed to the recent shift in emphasis to a more developmental perspective to illustrate changing insights, which needed to be considered in such a process.

Current practice

Unfortunately, large-scale studies of ECEC continue to suggest that too few educators have the necessary skills and knowledge to plan and provide optimal learning and social-emotional support for young children's intellectual and emotional development (Howes et al., 2008). As suggested above, knowledge and understanding of child development and relevant areas of learning can be inadequate or flawed.

The importance of good foundations in language development and literacy to support later learning is well documented (Coghlan et al., 2009; Sylva et al., 2004), and there is a considerable body of research illustrating how meaningful instruction in numeracy and science is a strong predictor of future academic success (Duncan et al., 2007). For example:

children's early knowledge of math strongly predicts their later success in math ... preschool mathematics knowledge predicts achievement ... into high school ... [and] ... reading achievement even better than early reading skills ... doing more mathematics increases oral language abilities [including] vocabulary, inference, independence, and grammatical complexity ... mathematics [in early years is cognitively foundational] to academic success in all subjects.

(Education Commission of the States, 2013: 2)

Educators need guidance on supporting aspects and areas of child development, including speaking and listening skills, emergent literacy, and emergent mathematics and science. They also need to understand appropriate pedagogical approaches for young children, including play and experiential learning, so that they link learning to the children's interests, and support children to understand the purpose and function of their learning. They need to know how best to support language, literacy, numeracy, exploration and science, and physical development – through both independent and focused learning activities and through partnerships with parents/carers. In addition, they need guidance on how to organise the environment to provide numerous opportunities for children to practice and apply newly learnt skills at an appropriate level (Siraj and Kingston, 2015).

Further, researchers, such as Raver et al. (2008), recognised that the effective adult-child interactions which are so fundamental to effective practice are often the types of interactions in which many educators have never themselves participated – neither as educators, nor as children. Recent PD programmes which have recognised and taken this into

account, including a mixture of the academic skills and knowledge necessary to assess children's interests and achievements, and to inform planning, etc. – together with relationship-building between the learner/student on the course and the tutors running them – have achieved good results. Typically, such PD has involved modelling, providing exemplars of sensitive and responsive interactions (through tutors' modelling as well as showing and analysing collections of video clips), and providing support for children's challenging behaviour (Erickson and Kurz-Riemer, 1999; Toth et al., 2011).

The general picture of PD, across ECEC, and its lack of coherence and consistency, is particularly concerning when public policy goals include enhancing the achievements of all children, as in Wales. Only high quality teaching and learning experiences have been associated with improved learning outcomes, which are likely to lead to narrowing 'the gap' of disadvantage (Sylva et al., 2004; Sylva et al., 2014). The Welsh Government, in their Foundation Phase action plan, outline the professional learning opportunities that should be available to educators working within the FP (Welsh Government, 2016). Given the universal findings regarding variations in content in courses and qualifications in ECEC, this appears to be a good first step. However, the quality and understanding of the trainers/tutors, their views about how and what should be taught, and the way programmes of study are structured are all likely to impact on quality and the depth of knowledge they impart. Therefore, capacity building at this level is essential to improving standards.

What does effective PD look like?

There is a growing literature based on the consideration of effective PD for the ECEC sector. Much of the suggested content is linked to well-established studies considering high quality provision and the characteristics of the educators working within them. New insights into what constitutes quality and the educators' current knowledge, skills and dispositions suggest that current PD requires rethinking.

Much of this article points to appropriate content for PD and also outlines possible and (intentionally) more objective measures of quality (ERS), which may support both educators and others in monitoring and moving practice forward. Some studies recommend the use of ERS as an important aspect of PD designed to support quality improvement (Zaslow

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et al., 2010) and others recommend their use to support collaborative and ongoing improvement processes (Mathers et al., 2012; Siraj et al., 2016b). Others point to the importance of providing educators with pedagogical tools (such as formats to support discussion, assessment, planning, cascading of ideas, evaluation and reflection) as well as exemplars of good practice (through modelling and the use of video clips) for discussion, analysis, replication and adaptation in classrooms/settings (Siraj et al., 2016a).

There are other aspects, beyond the content of the PD, which are beginning to emerge as important to its effectiveness. These include the delivery process and method, linked to the earlier identified types of PD (Zaslow and Martinez-Beck, 2006), and support for motivation and the confidence to change. A short overview of the most pertinent aspects of these is outlined below.¹

There is a growing consensus that one-off or day workshops generally do not impact on practice and that educators require greater sustained or intensive support (Wasik and Hindman, 2011). Some studies recommend that to be effective PD needs to extend over at least two terms (Cordingley, 2013); however, the precise definitions of sustained and intensive are still under debate. While such research points to the potential benefits of formal education, which is typically longer than some short in-service training sessions, it is important to remember that effectiveness rests on more than just duration.

The importance of allowing the time and opportunity for the educators to link theory with practice is a consistent theme in the literature on effective PD. Sheridan et al. (2009) suggest that educators need the opportunity to become aware of and know about new approaches and strategies to support children's outcomes, then to try these approaches out in their own classrooms/settings, and, finally, to refine these skills so they are fluent, flexible and practised. Kingston (in preparation) talks about the educators being given the opportunity to understand and know, then to apply and finally to reflect upon and evaluate new approaches – all of which require time.

Evidence of the impact of the collective participation of a critical mass of staff (including leaders/managers), from the same schools/settings, is beginning to emerge within the PD literature (Cordingley, 2013; Zaslow et al., 2010). Where PD included joint participation of staff from the same setting/school, it supported a joint culture of professional learning, the sharing of goals and practices and the continuity and progression of

children's experiences (Bierman et al., 2008; Burchinal et al., 2008; Zaslow et al., 2010).

A large number of more recent studies have used coaching and/or mentoring in their PD (Schachter, 2015). This is typically where an educator meets with an experienced expert on a one-to-one basis. The potential for building intimate relationships and providing individualised support has made coaching and mentoring popular, despite the obvious expense associated with them. However, as yet there is little evidence as to the effectiveness or longevity of such approaches (Wayne et al., 2008). The expense and difficulty in finding and retaining effective coaches has, more recently, led to web-based versions of these approaches (e.g. Downer et al., 2009). However, their effectiveness is yet to be established and if the educators' ability to engage in SST requires modelling and previous experiences of high quality interactions then online learning alone may not be sufficient. The arguments surrounding relational pedagogy are compelling and would suggest that e-learning alone may miss some vital elements of the learning process (see Raver et al., 2008). Research, which compares PD that focuses on relationship-building with PD that focuses on written elements or are mostly web-based, demonstrates that the relationship-building approach leads to increased adult-child positive interactions and child development in literacy, language, and social and physical behaviour (Archer and Siraj, 2015; Downer et al., 2009; Mashburn et al., 2010; Pianta et al., 2008).

Finally, PD that involves educators in networks or communities of practice are becoming popular, to support ownership and life-long learning. They are relatively inexpensive as they are reliant on the educators themselves implementing, or at least continuing, the process. Yilmaz and McMullen (2010), amongst others, extol the virtue of these approaches, as they are less expensive than other types of PD and potentially enduring in nature. However, further research is necessary to see how, and if, they impact on children's learning outcomes. In addition, there is a growing evidence base relating to the importance of PD involving tutors/mentors/coaches with specialist expertise (Cordingley, 2013; Fulkink and Lont, 2007) in effective PD.

Conclusions

Effective PD in ECEC appears to have two generic aims. The first is the advancement of the educators' knowledge, skills, dispositions and practices which support them in educating and caring for the children and working in partnership with the families/carers in their settings/schools. The second is to promote a culture for ongoing professional growth for the individual educators and the educational systems within which they work (Candy, 1991; Johnson and Johnson, 1989; Sheridan et al., 2009). Both of these aims are evident within the Foundation Phase action plan (Welsh Government, 2016).

To support lifelong learning, educators need to become critical and reflective thinkers and engage in quality improvement processes for themselves. The QUINCE research team (2013) suggest that using the environment rating scales as frameworks for improvement processes supports effective practice. Ideally, the educators (together with the head teachers/leaders within their educational context) take responsibility in directing their own ongoing growth and improvement. They collaborate with colleagues, engage with continued study of current and best practice, reflect and set personal action plans, all focused on supporting the learning and development of the children with whom they work.

There is a growing evidence base with regards to effective PD for ECEC; however, there is also still a deal of work to be done until a clear and consistent picture of what constitutes effective PD emerges. Zaslow et al. (2010) called for a structured, shared framework and language to support this further. The National Professional Development Center on Inclusion (NPDCI, 2008) published a definition and framework for PD in the United States. The framework outlines three key components of ECEC PD: the learners (Who), the content (What) and the instructional methods and approaches used within PD (How) – WWH.

While the 'who' appears, at first glance, to be the simplest component to identify, it is, however, a well-documented challenge for any work conducted in the ECEC sector. Within Wales the workforce is diverse and includes trained teachers with degrees as well as less qualified and unqualified staff working as teaching assistants in schools and the non-maintained private, voluntary and independent sector – the 'who'. This is not unusual in ECEC where educators often have differing understandings and experiences, as well as differing existing qualifications and roles within their schools and settings. Such differences may lead naturally to the

assumption that they may benefit from different approaches to and/or content in PD, that is the ‘what’ and ‘how’ for them may differ. While this is likely to be true, thought also needs to be given to PD which brings teams of staff together for face-to-face aspects of the PD. Developing collaborative and collegial approaches between and within staff groups and supporting joint engagement in quality improvement processes have increasingly been linked to effective PD and effective practice (King, 2013; Tout et al., 2015).

The ‘what’ and ‘how’ of the NPDCI framework (2008) are subject to ongoing debates; however, there is a consistent discourse with some agreement beginning to emerge in the current literature: PD that supports change and improvement includes what are often described as ‘essential key features’ of effective PD (Joyce and Showers, 2002; Dunst et al., 2010). Research and reviews seeking to identify, clarify and agree what these ‘essential key features’ are, however, still ongoing. Despite this, it is possible to identify some of the essential key elements or aspects that are linked to effective practice and enhanced children’s outcomes, many of which have been described in this article. The evidence base is clear about the characteristics of effective educators, the current needs of staff, problems associated with current PD and some of the key elements of effective PD, all of which could potentially inform future directions within Wales and support the successful implementation of the FP.

Note

- ¹ For a more detailed discussion around the process of delivery of PD and the motivation and confidence of staff which is required for improvement and how these link to the content of PD, see Cordingley (2013), Dunst et al., (2010) and Kingston (in preparation).

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Appendix A: Example Item from ECERS-E (Sylva, Siraj-Blatchford and Taggart, 2010: 38)

Item	Inadequate 1	2	Minimal 3	4	Good 5	6	Excellent 7
Item 10. Natural materials *							
1.1 There is little access indoors to natural materials (fewer than 3 examples).*		3.1 Some natural materials are accessible to the children indoors.*					
		3.2 Natural materials are accessible outdoors.*		5.1 Natural materials are used beyond decoration to illustrate specific concepts (e.g. planting seeds or bulbs to illustrate growth, seed dispersal). P D*		7.1 Children are encouraged to identify and explore a range of natural phenomena in their environment outside the centre and talk about/ describe them. (P D)*	
			5.2 Children are often encouraged to explore the characteristics of natural materials.*			7.2 Children are encouraged to bring natural materials into the centre. D Q*	
			5.3 Adults show appreciation, curiosity and/ or respect for nature when with children (e.g. interest in, rather than fear or disgust, for fungi or worms)*			7.3 Children are encouraged to make close observations of natural objects and/or draw them. P D R *	

Appendix B: Example Item from the SSTEWS Scale (Siraj, Kingston and Melhuish, 2015: 14

Subscale 1 Building trust, confidence and independence

Item	1	2	3	4	5	6	7
	<i>Inadequate</i>		<i>Minimal</i>		<i>Good</i>		<i>Excellent</i>

Item 1 Self-regulation and social development

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| <p>1.1 Staff do not appear to agree about the boundaries/ rules/expectations or apply them consistently.*</p> <p>1.2 Some children are left even though they are obviously confused or distressed.</p> | <p>3.1 Expectations and boundaries are made explicit and shared by all staff.*</p> <p>3.2 Staff are respectful and professional around the children, parents/carers and each other.*</p> | <p>5.1 Staff explain carefully to the children what they need to do and pre-empt any difficulties.*</p> <p>5.2 Staff show empathy and understanding when children do not want to follow rules or get upset.*</p> <p>5.3 Staff show an awareness of individuals and their needs, giving additional support and allowing some flexibility.*</p> <p>5.4 Staff redirect inappropriate behaviour by stating what the children should do rather than what they should not.</p> | <p>7.1 Staff congratulate children when they follow the rules well. E.g. I saw you help put the tractor away. And/or the children are encouraged to tell staff how they followed the rules etc.*</p> <p>7.2 Staff have agreed processes that they follow when conflicts arise. The process includes engaging the children in problem solving and finding solutions to disputes together.*</p> |
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