

Quality assurance is a process of measuring a service meets specified requirements, establishes and maintains set requirements for developing children's quality of care. High-quality settings have the biggest impact and are the settings which enable children to reach their full potential and support them in reaching good levels of development and reduce inequalities (Department of Health, 2004; Department for Children, schools and families, 2009). As well as a good level of development, the quality of care in early years settings allows children to develop a variety of other skills including, social skills, independence, expected levels of behaviour in a school environment, communication and language skills, confidence and self-esteem (Siraj et al. 2015a; Siraj and Kingston, 2015; Department of Education, 2017a).

The effective pre-school, primary and secondary education (EPPE) project provides convincing evidence based on longitudinal studies demonstrating a connection between the quality of early years provision and the positive outcomes for children (Sylva et al. 2004; Sylva et al. 2006; Welsh Government, 2013; Department of Education, 2017a). The EPPE study identifies the higher the quality of early education delivered in pre-schools increases the child's development and demonstrates a connection to better outcomes in General Certificate of Secondary Education (GCSE) maths and English (Sylva et al. 2006; Welsh Government, 2013; Department of Education, 2017a; Department of Education, 2017b). The evidence provided in the EPPE study also shows children who attended high quality early years provision were more socially competent, with higher cognitive and linguistic outcomes and fewer behavioural problems and achieved more in adulthood (Sylva et al. 2006; Richard et al. 2010; Welsh Government, 2013). However, the EPPE study was established to gather research on children from impoverished backgrounds and parents with low qualifications, with relevant evidence that the high-quality care at pre-school reduces the gap in development and ensures all children are at a good level of development with a better start in life (Hall et al. 2012; Taggart et al. 2015). Although, the EPPE also states children attending pre-schools that meets the regulatory requirements and standards has an enduring positive impact on children compared to those that did not attend pre-school or had poor attendance (Welsh Government, 2013; Welsh Government, 2016; Department of education, 2017a).

The research evidence gathered in the EPPE study compliments the professional development in the Early Childhood Environmental Rating Scale (ECERS) and the Sustained Shared Thinking and Emotional Well-being Scale (SSTEW) (Sylvia and Siraj-Blatchford, 2003; Siraj et al. 2015a; Siraj et al. 2015b) The ECERS and SSTEW work well with the Early Years Framework and comply with the National Quality Standards (Welsh Government, 2016).

However, the Early Years Framework is a pedagogical process framework where the ECERS and the SSTEW provides knowledge around language, literacy, mathematics, numeracy, early scientific thinking and effective interaction (Siraj et al. 2015a; Siraj et al. 2015b; Siraj and Kingston, 2015).

Both the ECERS and SSTEW rating scales are a set of accreditation tools designed by National Association for the education of young children (NAEYC) to measure the effectiveness of the quality of early years practice provided is above the National Minimum Standards (Guernsey and Ochshorn, 2011; Siraj et al. 2015a; Welsh Government, 2016).

The Rating scales are an effective method for measuring the quality of care indicating reliable scores, converting information into meaningful data allowing a statistical analysis of the quality delivered to children in pre-school settings (Stipek and Byler, 2004; Sylva et al. 2004; Sylva et al. 2006; Guernsey and Ochshorn, 2011; Ilgen et al. 2015). However, performing a rating task has important implications, individuals need to be trained and given the required information to collect appropriate performance information (Mathers et al. 2007; Guernsey and Ochshorn, 2011). Obtaining the required training will ensure the rating scale is consistent in a manner that would facilitate accurate ratings and not their personal perceptions of the categories that fail to rate the quality the test constructor intended (Mathers et al. 2007; Guernsey and Ochshorn, 2011; Bell and Waters, 2014; Roberts-Holmes, 2014). Research indicates the observational tools carried out in early years provision has shown significant progress in relation to social and emotional development compared to those who didn't receive training (Guernsey and Ochshorn, 2011; Department of Education, 2017a; Department of Education, 2017b). Although Sylva et al. (2003) and Siraj et al. (2015a) states the scales have been developed through realistic field-based research producing valid and reliable observational tools suitable for research, program evaluation and improvement. However, the rating scales do not potentially give a realistic evaluation due to the limited time of observation impacting on the overall scores, where a highly qualified practitioner is unavailable and not in the classroom (Sylva et al. 2006; Richard et al. 2010; Ilgen et al. 2015). Although through moderation the ECERS has been reviewed and updated with the Early Childhood Environment Rating Scale Review (ECERS-R) to enable the observation to be carried out over a full day rather than half a day (Sylva et al. 2006; Department of Education, 2017a). However, Guernsey and Ochshorn (2011) and Siraj et al. (2015) state the observational tools have a positive impact on the professional development of practitioners, encouraging practitioners to evaluate their current

teaching practices through good training to develop skills and motivate the desire to learn to improve the quality of education for children.

The ECERS focuses on the quality and arrangement of the space and structure of the environment both indoors and outdoors, for children to access quality materials independently and participate in activities offered that promote interactions with staff and children to develop language (Siraj et al. 2015a; Siraj et al. 2015b; Sylva et al. 2003). However, Sylva et al. (2006) and Guernsey and Ochshorn (2011) criticises the assessment tool as there was little connection with social interactions and intellectual observations of literacy, numeracy and science investigations.

Piaget cited in Pound (2011) agrees with the ECERS that focuses on the more global process of measures. Piaget's theory indicates children are little scientists where they explore the natural materials and resources in the environment to acquire new knowledge and understanding to build upon existing knowledge known as schemas to enhance development (Knight, 2011; Pound, 2011; White, 2014). The environment is important to enhance development, inviting children to explore replacing existing schemas through repetition and pattern building through the process of accommodation changes and extends cognitive structures, Piaget called this stage accommodation (Pound, 2011; Bruce, 2012). It is essential to provide children with rich resources that encourage curiosity and enthusiasm for children to experiment and build co-operation through problem solving activities to enhance their holistic development (Guernsey and Ochshorn, 2011; Bruce, 2012; Fumoto, 2012; White 2013; White, 2014).

Although, the ECERS is a significant factor within the Department of Education and Skills where children learn through play-based activities, the quality of the independent learning relies on the quality of the environment where the exploration takes place (Scott and Waters, 2011; White, 2013). The quality of the structure and space has a positive impact on the child's development, where a quality environment allows them to move freely between the indoor and outdoor learning provision involving large and small physical movements essential for co-ordination development and well-being (Department for Children Schools and Families, 2009; Scott and Waters, 2011; White, 2013) Montessori's theory agrees with the ECERS scale and states the adults role is to safely construct the environment to allow freedom of movement and choice, the child is dependent on the environment to provide success in their development (Knight, 2011; Fumoto, 2012; Prichard, 2014).

In conjunction with the ECERS the Early Childhood Environment Rating Scale-Reviewed (ECERS-R) and the Early Childhood Environment Rating Scale -Extension (ECERS-E) has been developed to meet the guidelines in the curriculum of the Department for Education and Skills (Department for Children, Education, Lifelong Learning and Skills (DCELLS), 2008; Department of Education, 2017)

However, Mathers et al. (2007) states additional support for practitioners is more effective, by providing practitioners with experiences to enhance confidence to improve the layout, structure and exploration of the environment with the required materials to enhance the opportunities for children to receive high quality early years provision.

The ECERS is an effective measure however, the EPPE and the Researching Effective Pedagogy in the Early Years (REPEY) study has provided evidence that other important aspects of development need to be considered to enhance children's outcomes, where the SSTEW scale was then introduced (Siraj-Blatchford, 2009).

Guernsey and Ochshorn (2011) state the SSTEW observational tools are a positive measure of interactions between practitioners and children that many observational tools do not capture. The observational tool is beneficial to enhance practitioner's professional development with clear concept of the benefits of rich interactions to support learning and development (Siraj et al. 2015a; Siraj and Kingston, 2015). Research indicates interactions are most important in the early years where children are active learners developing physical, intellectual, social and emotional skills linking to higher long-term academic skills (Bruce, 2012; Reed and Canning, 2012).

In accordance to effective communication is the key factor to develop learning, encouraging children to interact and elaborate on ideas with peers, asking open ended questions to develop knowledge, understanding, language and listening skills (DCELLS, 2008; Washington, 2010; Prichard; 2014; Smidt, 2015). Child interactions are important factor to their social, emotional and well-being where children verbally express and exchanged feelings and emotions with peers suggesting sustained shared thinking encourages children to discuss ideas and relate to experiences to form emotional bonding and friendship (Canning, 2011; Reed and Canning, 2010). Sustained shared thinking develops learning focusing on the child's interest that has positive impact on learning outcomes, where evidence states children acquires more maths skills and positive perceptions of academic gains in abilities (Stipek and Byler.2004; Smidt, 2015).

Vygotsky and Bruner cited in Pound (2011) agrees stating language is an important learning tool, where learning is developed by the more knowledgeable other (MKO), individuals of all ages have experiences and knowledge to educate others. Both theorists emphasise the importance of children working with or alongside peers of all ages promotes learning through exchanging knowledge, experiences and new ideas (Canning, 2011; Bruce, 2012; Prichard, 2014; Smidt, 2015). Vygotsky cited in Smidt (2015) and Bruce (2012) indicates that socializing through a collaborative dialogue with more capable other or adult's scaffolds children learning, proposing the zone of proximal development (ZPD) where the learning distance between the actual developmental level as determined through problem-solving under adult guidance, or in collaboration with more capable peers. Practitioners supporting the child through shared sustained thinking provides them with the confidence to attempt a task and the skills learned will be used to further development (Siraj-Blatchford, 2009; Pound, 2011).

Research indicates the benefits of older children in the early years provision promotes higher levels of interactions that develop the language, reasoning skills and supports the curricular outcomes (DCELLS, 2008; Department of Education, 2017a; Welsh Government, 2017).

However, a vast age difference can impact on the child's shared learning with lower quality interactions and resources to challenge educational activities due to the younger children requiring more time and care (Mathers et al. 2007; Ruitling et al. 2009). However, Mathers et al. (2007) emphasises further research is required to assess the quality of care in settings regarding the number of children in the setting and the different age groups.

The ECERS tool assesses the adult to child ratio as an important factor of quality early years provision, where the SSTEWS scale has been found to be more predictive of child outcomes through sustained shared experiences (Sylva et al. 2003; Siraj et al. 2015a; Siraj et al, 2015b). However, the adult to child ratios are important to the quality of early years provision not only to achieve intellectual outcomes but to enable the practitioner to have quality interactions, to be sensitive and responsive to children's needs and holistic development (Mathers et al. 2007; Welsh Government, 2013; Department of Education, 2017a; Department of Education, 2017b).

Both the ECERS and SSTEWS rating scales are available for purchase and can be used as self-assessments to identify key areas to improve quality practice (Sylva et al. 2004; Sylva et al. 2006). The observational scales may be useful to stimulate practitioners to be open minded through revisiting an experience identifying qualities and areas of improvement (Reed and Canning, 2010; Canning, 2011). An effective reflective practitioner can work with the scales

to make personal judgements on own experience by critical analysis and evaluation to improve the quality of practice, building on knowledge and values to become an effective reflective practitioner (Guernsey and Ochshorn, 2011; Lindon, 2012; Bolton, 2014; Siraj-Blatchford and Hallet, 2014). However, research requires a structural plan to produce quality to improve the performance of practice (Boud and Walker, 1998; Reed and Canning, 2010).

The Teaching Development Agency (..) state the importance of reflective activity on professional learning for development in attributes, knowledge, understanding, skills to improve practice necessary for innovation and change (Blatchford and Hallet, 2014; Department of Education, 2012; Sylva et al. 2003; Sylva et al. 2004; Sylva et al. 2006). Guernsey and Ochshorn (2011) states early years provisions that used the observational tools with support from mentors showed significant amount of positive impact on children's social and emotional skills compared to other provisions who did not use observational tools to measure quality. However, the improvement of quality is not just a single event, it is a continuous process of evaluation identifying key aspects regularly to improve practice (Reed and Canning, 2012). Research indicates reflective practice is a process to develop skills, where practice is reflected upon, experienced and reflected on again as a continued professional development cycle. Essential to improve personal skills providing effective learning for children (Reed and Canning, 2010; Reed and Canning, 2012; Venninen et al. 2012).

Highly qualified staff are significant factors in high-quality early years provisions to provide educational quality. Settings of staff with higher qualifications indicate children have higher developmental outcomes. However, Guernsey and Ochshorn (2011) state the cost of training to educate practitioners and to cover staff when out on training may be a barrier for many settings. However, the ECERS and SSTEWS rating scales are available to purchase as a reflective tool to evaluate quality as individuals or as a setting.

Overall the ECERS and the SSTEWS rating scales are an effective method of measuring quality and improve professional practice to enhance children's learning (Siraj and Kingston, 2015). Both rating scales include the six areas of early learning goals, Personal, Social and Emotional Development; Communication, Language and Literacy; Problem Solving, Reasoning and Numeracy; Knowledge and Understanding of the World; Physical Development; Creative Development (DCELLS, 2008; Department of Education, 2017c).

However, Sylva et al. (2006) and Sylva et al. (2003) state the instruments differential ability to predict cognitive and social development over pre-school period suggest that different aspects of children's development are related to different aspects of quality in every day practice.

However, both rating scales are an effective tool in rating quality, but together they both provide a better rating of the overall quality of care and data of excellent quality.

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