Building the Foundation for Lifelong Learning: An Exploration into the Development of Thinking Skills and Personal Capabilities through Play

Capstone Project

Rebecca Killen

St Mary's University College, Belfast

Table of Contents

Chapter Four: Presentation and Analysis

Chapter Five: Discussions and Conclusions

Appendix

Acknowledgments

The completion of this exploratory study would not have been possible without the support and guidance of those involved.

In particular, I would like to express my gratitude and thanks to my capstone supervisor, not only for her guidance, knowledge and patience, over the past four months, but also for her consistent dedication and encouragement. Her support has been invaluable to this study.

I would like to express my sincerest gratitude and appreciation to all who participated in this study. Without their eagerness, cooperation and knowledge, this would not have been possible. Thank you for your time and expertise.

Abstract

This exploratory study set out to uncover the potential of using play to develop pupils' thinking skills and personal capabilities (TSPC). I selected this topic because developing these skills and capabilities is vital to equip pupils with the flexibility needed to adapt to a rapidly changing world, and in the early years, play is the medium to achieve this. To gather this data, I observed five sessions of play in a HighScope school, interviewed three foundation stage teachers, and a further ten teachers completed questionnaires. The findings indicated that all strands of the TSPC were developed during play, and teachers' preparation and intervention were a powerful catalyst in their development.

Chapter 1:

Introduction

Introduction

Rationale

Early Years practitioners have the power and privilege to help shape the lives of children. Thus with such power, comes great responsibility. This is why the Early Years is referred to as the Foundation Stage, as it is laying the foundations for lifelong learning. This leads Dowling (2005) to highlight that just like faulty foundations in a building, errors in the early years can have significant, long lasting effects on pupil's development. According to EYFS (DfE 2014), the three characteristics of effective learning in Foundation Stage include; playing, active learning, and thinking creatively. Hence why play is at the heart of early childhood, and at the core of the curriculum. Play is considered to be one of the primary needs of a child, which is evident by its inherent nature of being; child initiated, child chosen, and process orientated (Tassoni and Hucker, 2000). As well as being an intrinsic part of a child's activity, play is an important vehicle for learning, as children express who they are, what they know, how they feel and what they can do (Feeney et al,2006). Thus, this holistic nature is essential for the child's cognitive, physical, social and emotional development (Brierley, 1994). To enable pupils to become lifelong learners, pupils must develop the 'fruits' of learning, which involve their skills, attitudes and capabilities (Ball, 1994).

In Northern Ireland, the Thinking Skills and Personal Capabilities (TSPC) framework brings together the five interlinked strands of being creative; thinking, problem-solving and decision-making; managing information; self-management; and working with others (CCEA(Council for the Curriculum, Examinations & Assessment), 2007). Luna et al (2018) note that the old transmission-acquisition model of teaching was simply insufficient in equipping children with the flexibility and thinking-skills needed in the 21st century (Wood and Attfield, 2005). In today's workforce it is not enough to be literate and numerically competent, the demand is now for people who can think creatively and problem solve. Children starting school now will live into the latter part of the twenty-first century, so teachers have the responsibility to help children adapt to the rapidly changing world. Venville (2002)

points out that much of the existing literature on TSPC highlights their importance, yet doesn't focus on how they can be developed.

The rationale behind my exploration into play is because play is an active form of learning with extraordinary potential. However, this powerful potential often gets lost amid the focus on 'real' learning (Hakkarainen, 2006). BERA (2003: 14) states that '*whilst play forms the bedrock of early learning…play in practice is deeply problematic*'. Many factors in contemporary society hinder purposeful play. Outside of school, fears over children's safety have caused helicopter parents (overprotective and hovering) to impose restrictions on types of play, and the unsupervised areas have shrunk by 90% since 1970 (Whitebread, 2012). New technologies and TV deprive pupils of crucial first-hand experiences, and inhibit children's physical and creative play (Wood and Attfield, 2005; Tassoni and Hucker, 2000). Moreover, Riley (2007) highlights that teachers often under exploit the power of play as they do not understand how play promotes development. Separating play and learning is often subconsciously reinforced by teachers when they say 'you can play when you have finished your work' but practitioners should realise 'where there is play there is learning', (Davis, 1996:222).

Aims and Objectives:

I aim to explore:

- Can play be used to support the development of pupils' TSPC?
- What are teachers' views of play?
- What strategies do teachers use to promote the development of TSPC through play?

This study aims to add to the body of literature and deepen understanding about the benefits and possible short comings of using play to promote the holistic development of pupils. It will also inform practice, providing strategies teachers can use to promote such development.

Chapter 2:

Literature Review

Literature Review

The History of Play

"Play is the highest expression of human development in childhood, for it alone is the free expression of what is in a child's soul', (Froebel, 1898/2005:55).

This quote echoes the importance of play in the lives of young children, as play has received global recognition and is interwoven into the very fabric of Early Years education. Play has become enshrined in practice due to its recognised impact on all areas of development, including cognitive, emotional, physical and social (Papatheodorou and Potts, 2016). However, despite its esteemed position, Lester and Russell (2010) note that among educationalists there are often different and contradicting views on the nature and value of play. In fact, there remains no agreed definition of play. Bruce (2004) stresses that play remains an umbrella term, whilst Santers et al (2007) believe the reason for this is because play is conceivably too intangible and profound a concept to concisely define. Oxford dictionary (2018) define play as 'engaging in an activity for enjoyment and recreation rather than a serious or practical purpose'. The problem with this definition of play is that is separates play from learning. This definition is reflective of past theories on play. Education does not exist in a vacuum, but is influenced by societal attitudes towards childhood. Preindustrial society regarded children as small adults and workers (Riley, 2007). It was only during the industrial revolution that play became recognised, due to child labour laws allowing more time for play (Tassoni and Hucker, 2000). Nevertheless, play was simply regarded as a leisure activity, reflected in theories, such as Lazarus' 1900's 'recreation theory' which stressed that play restores energy after work, and Spencer's 1873 'surplus energy theory' which posed that play was a way to release children's excess energy (Moyles, 2005).

It was the writings of early educationalists, which sowed the seeds for play being the basis of early childhood education. Friedrich Froebel (1782-1852) who founded kindergartens, pioneered the view

that play integrates the child's learning by allowing them to develop through direct experience, Bruce (2005). Particularly influential in the UK, were British thinkers McMillan (1860-1931) who opened the first Nursery, and Isaacs (1885-1948) who believed play provided essential exploration and expression in early year (Feeney et al, 2006). After the introduction of the first curriculum in 1988, EYCG (Early Years Curriculum Guidelines (1989) asserted the curriculum requires a greater promotion of the validity of foundation stage and play in its own right. Since 1999, CCEA(1999) have sought to improve play pedagogy and practice, to value play as the work of the child.

How Play Relates to How Children Learn

Brain Development and Early Experiences

The relationship between play and learning is a complex concept. Although they are often dismissed as separate entities, they are rather deeply intertwined (Theobald et al, 2015). Significant advancements in understanding how children's brains develop, stems from John Brierley (1994). He asserted that the brain reaches 95% of its adult weight during the first ten years of life (Nutbrown, 2006). Riley (2007) echoes this when she refers to childhood as a 'sensitive period' for brain development as a child's brain is twice as active as an adults'. Recent brain studies specify that learning occurs when connections are made within the brain after receiving an external stimulus from the senses (Moyles, 2005). From a Piagetian perspective, children use all their senses in play and this experience can trigger assimilation and accommodation, when new information is compared to existing schema and the schema is adapted accordingly (Haughton and Ellis, 2016).

Play and Constructivism

Research by Bruner (1972) points out that with different animal species a relationship exists between the length of immaturity and the capacity for learning. He argued that play is key to learning and the longer the length of play, the greater the flexibility in thought. This is because play offers opportunities to learn through experience. This focus on first-hand experience is reflective of the constructivist

approach to education, which views children as active learners seeking meaning rather than 'empty vessels waiting to be filled' (Driscoll, 2005:487). Therefore, the approved enactive, iconic and symbolic model of learning underpins exploring materials and ideas first hand in play (Bruner, 1966).

Play as a Child-Centred Holistic Approach to Learning

Among contemporary educationalists, there is consensus that education is first and foremost about the child. This child-centred approach permeates throughout play as Meckley's (2002) key characteristics of play reveals it is child chosen and child invented. Theobald et al's (2015) research into children's perspectives of play discovered that children value having choice and ownership of their activities. Fostering a love of learning is important as enjoyment causes the brain to release the chemical serotonin, which opens the child up to new learning, (Bruce, 2004). Moreover, research indicates that children learn effectively when the teaching is pitched at the right level, challenging yet within the learners' reach (Bruce, 1991). In play, children perform their tasks at their own level, thus learning is developmentally appropriate (Whitebread and Jameson, 2005). It is now understood that it's not simply enough to develop the child academically, but holistically. This hinges upon Gardner (1983) who argued that the curriculum should educate all forms of intelligence, as all domains of the child are important to learning. Wisneski and Reifel (2012) highlight that a vast web of research indicates play promotes social, emotional, physical, and cognitive development. Therefore, Langston and Abbott (2005:28) state 'for young children play and learning are inextricably linked, the one often leading to the other'. Hence why play is referred to as the work of the child.

Views on Play: Worldwide and National Level

Devaluation of Play

Despite studies revealing the importance of play, in practice, it is often dismissed**.** Miller and Almon's (2009) report 'Crisis in the Kindergarten' alerted the public about the lack of play in many classrooms. This is often reflective of parental views that favour a more formal approach to schooling grounded in

the assumption that 'earlier is better' (Wood and Attfield, 2005). This point is reinforced by ATI's (2000) research that revealed 72% of parents wanted academic work to start early. Wisneski and Reifel (2012) note that in the US there is a resurging devaluation of a play-based curriculum due to increasing pressures of standardised child outcomes. Similarly, throughout Europe the same effect is taking place. Whitebread's (2012) research into the European perspective revealed that only the education systems in Denmark, Germany and Sweden provided good opportunities for play, whilst Italy, France, UK, Spain and Poland believed they had insufficient time due to emphasis' on academics.

Examples of Good Practice

The power and potential of play is particularly evident in Nordic education, as Froebel's thinking heavily influenced these countries (Hakkarainen, 2006). Finland, renowned for its successful education system, takes play seriously. As embedded throughout the curriculum, is the promotion of play-based learning. Throughout the school, Finnish law requires 15minutes play time for every 45minutes directed learning (Hyvonen, 2011). Moreover, the educational approach, HighScope, holds play in high regard, as activities stem from children's interests through 'active-participatory learning' (Holt, 2010). Founded in 1970 by Dr Weikart, this approach is rooted in thinking of educational theorists Piaget and Dewey, and shaped by the belief in child-centred, active learning (French, 2012). Play-based learning is the cornerstone of this approach, experienced through plan-do-review and small group time. Small group time is planned play activities which consists of five important elements; choice, materials, manipulation, language and support from adults. These play activities, whilst planned and facilitated by the teacher, stem from the pupils' needs and interests (French, 2012). Plan-do-review is child-initiated play which empowers pupils to take ownership of their learning as they plan, carry out and evaluate their play (Holt, 2010). During this time of active exploration, the teacher scaffolds learning by 'extending activities to nourish children's schema' (O'Flaherty, 1995:52). Likewise, Reggio Emilia is an approach founded in Italy by Malaguzzi, which places play at its core. In Reggio, the view that play is one of 'the hundred languages of children', is evident as rather than following a predetermined

curriculum, learning develops from projects with open-ended equipment and natural resources, (Thornton and Brunton, 2009; Fraser and Gestwicki, 2002).

Play in Northern Ireland

Although, these approaches to learning differ from the Northern Ireland education system, Thornton and Brunton (2009:127) highlight that the NI curriculum 2007 'resonates with the core values found in Reggio'. This is highlighted within the curriculum as it states children should 'experience much of their learning through well planned and challenging play' (CCEA, 2007:9). In addition, guidance documents 'Learning through Play' for FS and KS1 outline how to approach play. Despite the political endorsement of play in Northern Ireland, Hunter and Walsh (2014) identify problems in practice and call for practitioners to a have a higher-level of expertise on the pedagogy of play. However, Walsh (2016) notes that play-based pedagogy is only an accessory, in an otherwise over-selective and assessment-led education system.

CCEA's TSPC

At the heart of the Revised NI curriculum is the focus on TSPC. These are infused and embedded throughout the curriculum, at every key stage, Davies (2009). CCEA is urging the development of these skills by providing opportunities for pupils to 'think and do for themselves', CCEA (2007:10). This move towards higher levels of thinking comes at a time when society is looking for people who can analyse information, problem solve, and think creatively (Walsh et al, 2007); Shively et al, 2018). These skills and capabilities are of worldwide concern, as the world needs innovators to solve social, economic and environmental problems (Dole, 2018). This has led many countries, just as in the case of Northern Ireland, to decrease the focus on content knowledge, and increase the emphasis on transferable skills (Walsh et al, 2007).

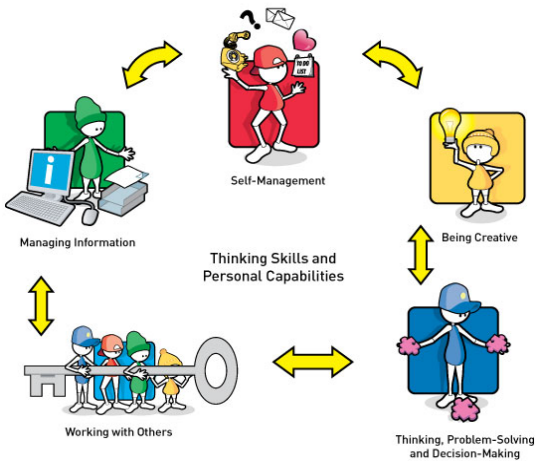


Fig 1 Thinking Skills and Personal Capabilities Framework CCEA 2007

Can Play Develop Pupils' TSPC?

Creativity and Problem Solving

Ken Robinson (NACCCE (National Advisory Committee on Creative and Cultural Education) 1999:30) describes creativity as 'imaginative activity fashioned so as to produce outcomes that are both original and of value'. Creativity is often associated with famous artists and inventors; however, creativity is present in ordinary people in everyday activities (Ye Hwang ,2017). Craft (2001) highlights the notion of this little 'c' creativity that everyone has the capacity develop his/her 'possibility thinking'. In early years, play and creativity appear to be almost identical. Aljarrah (2017:23) notes,

'Imagination, play and creativity are necessarily interrelated and interwoven as one fabric; they complete and prompt each other…opening the door to the possible and the not-yet experienced'.

Play develops possibility thinking as children have freedom to make choices about activities and explore materials to discover 'what can I do with this object?' Like play, creativity and thinking are process orientated rather the outcome. Whereas the act of playing has inherent value, so does the act of brainstorming, thinking and testing different possibilities (Shively et al, 2018).

Hughes (1981) who used standard and non-standard object uses to test for divergent thinking, brought the link between creative thinking and play to the fore. Hughes' (1981) study is useful for indicating how playing with objects allows pupils to test possible outcomes and come up with original ideas. Similarly, play was connected to the ability to problem solve by Bruner. Through his experiments he revealed that play fosters perseverance when solving problems, whilst teaching tended to lead to an all or nothing approach (Sylva et al, 1976; Whitebread and Jameson, 2005). I think the reasons for such findings lie in the exploratory nature of play. In play, children experiment and explore the world around them, which allows them to think for themselves. Hence, when they are faced with a problem, they have the skills to solve it rather than relying on the teacher.

Working Together

CCEA's promotion of working together is important because the ability to communicate effectively and work as a team is a life-long skill necessary to function in society and desired by businesses (Luna et al, 2018). From an early age, children have an emergent capacity for social behaviours, displayed by their growing interaction from associative play to cooperative play (Bennett and Palaiologou, 2016). Play gives pupils the opportunity to engage in meaningful social interactions, for instance collaborative games allow children to practise sharing, and negotiating when disagreements arise. Thus, it is making pupils aware of the needs of others by recognising how their co-players feel and act (Barton et al, 2018; Robinson, 2012). When children engage in socio-dramatic play, they are demonstrating their growing awareness of their social environment and social interactions, which helps them make sense of the real world. Therefore, Isaacs (1885-1948) argued that play allows pupils to learn social rules and prepare for the future (Tassoni and Hucker, 2000).

For children, language is the manner in which they express their thoughts and understandings. When a child puts their experiences into words, it helps them understand it (Roberts, 1971). According to Roberts (1971:57), 'language is better caught than taught at this age'. Play can be an effective way for language to develop as they are talking and listening to peers and teachers, in an environment free from pressure (Bruce, 2004). Hutt et al (1989) conducted a study with nursery pupils, classified as disadvantaged, and who were displaying 'language poverty'. The results uncovered that during fantasy play the pupils showed much greater competence in their language usage, so much so that the difference in their speech codes could almost be classed as 'bilingual'. One reason for this is that in play, pupils are free from social constraints when expressing their thoughts and ideas, subsequently the language used is also unconstrained (Bernstein, 1973).

Self-management and Managing Information

Carter (2002:8) points out that 'the brain and the body are not separate'. Children need to cultivate their sense of self, as part of their holistic development and play provides the means to do this

(Haughton and Ellis, 2016). During pretend play, children practise responding to feelings, for example, the fear arousing experience of going to the doctor. Consequently, children learn to understand the feelings of others and regulate their own feelings (Haughton and Ellis, 2016). Play also allows children to express feelings that they may not be able to communicate on a conscious level (Langton and Abbott, 2005). This is evident as play can help children come to terms with puzzling events, by reflecting and acting out the situation, for example, Bruce (1991) and Hutt et al (1989) refer to a child repeatedly looking after a baby as wallowing in their feelings and reflecting on their relationship with their new sibling.

Wood and Attfield (2005:69) define metacognition as 'the self-conscious participation and intelligent self-regulation in learning and problem solving situations'. Theorists argue that play is important to the development of metacognition because it is based on self-reflection and abstract thinking (Kervin and Vernenikina, 2018). In play, pupils learn how to set goals, plan and organise their approach to a task (Feeney et al, 2006). As children are in control of their play this allows them to take ownership of their learning. This in turn, instils intrinsic motivation, leading to positive attitudes towards learning.

How can Teachers Help Foster the Development of TSPC through Play?

Ethos

Key to cultivating TSPC is creating a safe environment where pupils feel comfortable to collaborate, take risks and learn from mistakes (Dole, 2018). This secure environment is important as Hargreaves (2012) reveals that pupils need strong social, cognitive, emotional and motivational foundations for creativity to flourish. Therefore teachers should motivate pupils to 'give it a go', rather than 'get it right' (Robson, 2012). Moreover, CCEA (2007b:14) encourages teachers to 'make thinking important'. Strategies to promote such thinking include; encouraging pupils to make elaborate plans before play, ask them open-ended questions, and reflect and recall after play (Walsh et al, 2007).

Resources

A number of studies indicate that providing open-ended resources leads to fruitful play. Nicholson (1971) coined the term 'loose parts', which means providing variable materials to enrich the play environment (Houser et al, 2016). Likewise, Broadhead and English (2005) put forward the idea of a 'whatever you want it to be place', an open-ended role-play area resourced with boxes, fabric, tubes etc. to allow for variety in fantasy play, rather than simply a 'house area'.

Sensitive Intervention

Teachers' interventions can have both positive and negative effects on pupils' play. Dangers of hindering play arise when teachers dominate and over intervene. Bruce (1991:38) warns teachers not to dictate play but to be 'crucial and sensitive catalysts in its development'. Moyles' (2010) play spiral provides an effective framework for progressing development by creating a balance between free and directed play. Therefore, effective teacher intervention can promote the development of TSPC.

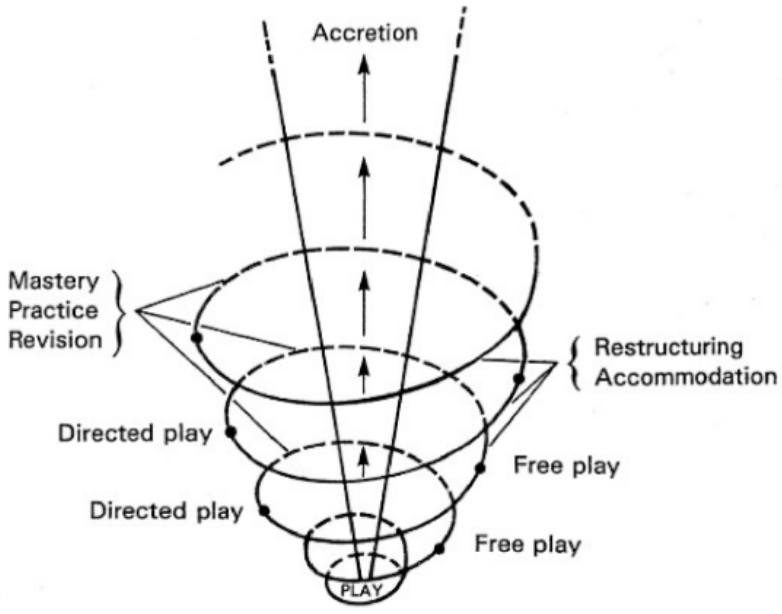


Fig 2 The Play Spiral (Moyles 2010)

Chapter 3:

Methodology

Methodology

Introduction

The term research is often described using Kerlinger's (1970:8) definition of being 'the systematic, controlled, empirical and critical investigation of hypothetical propositions about presumed relations among natural phenomena'. Research is not simply about gathering facts, but rather, critical enquiry aiming to deepen our understanding of the world we live in (Bassey, 1999).The purpose of educational research is to illuminate and improve practice (Basit, 2010; Rolfe and MacNaughton, 2010). In this chapter, I will outline the methodology undertaken to gain sights into the study's research questions.

Paradigm

Underpinning research methods are important philosophical questions, because how we understand social reality must reflect how we choose to study it (Baxter et al, 2006). This is because paradigms give rise to methodological considerations, which influence the instruments of data collection (Hitchcock and Hughes, 1995, Cited in Cohen et al 2000:3). Thus, at the core of the ongoing deliberation over qualitative and quantitative methods, is a debate of perspective, with some researchers seeking to uncover the facts, whilst others are searching for understanding (Cohen et al , 2018; Haq, 2014). The decision to use a quantitative or qualitative approach should stem from the nature of the data under investigation, Matthew and Ross (2010). For this exploratory study, I believed an interpretivist approach best suited the research questions. Thus, as my aim was to understand lived experiences, the interpretivist stress on contextual verstehen, and 'seeing through the eyes' of the participant allowed me to explore the pedagogy of play in naturalistic settings (Walliman, 2005); Haq, 2014).

Triangulation

According to Pring (2015), educational research is more complex than adopting a solely quantitative or qualitative approach. Triangulation, attempts to map out the complexity of human behaviour, by

studying it from more than one standpoint (Cohen et al, 2000). Central to this approach is the premise that a combination provides a better understanding of research problems (Cohen et al, 2018). This is because research methods act as a lens through which we selectively experience an environment, thus, reliance on one method may distort the researcher's picture of the investigated reality (Cohen et al, 2000). However, triangulation is not without its critics, with Silverman (1985) claiming the very notion of triangulation undermines the interpretivist approach, with its claim that multiple data is superior to a single data source. Nevertheless, triangulation is a powerful tool to combat the limitations of methods, and cross check to validate the data. Therefore I made use of triangulation by using quantitative questionnaires to cross check my findings from observations and interviews.

Interviews

Conducting three semi-structured interviews with experienced foundation stage teachers allowed for the collection of rich data. Semi-structured interviews provided powerful insights, as open-ended questions empowered the participants to express their opinions in their own way (Matthews and Ross, 2010). Kvale (1996) points out that the key characteristics of interviews include; exploring the lived situations, an openness to new insights, and using natural language. Thus, the interview questions were conversation like and enabled the interviewees to talk about their own practice. When conducting the face-to-face interviews, the benefits were evident, as they allowed me to probe teachers to explain in more depth and test the limits of their knowledge (Sharp, 2012). Moreover, the face-to-face aspect enabled a rapport to become established, hence, visual signs such as smiles and nods prompted fuller answers and enabled a truer assessment of the quality of responses (Walliman, 2005). However, interviews also have disadvantages, with Tuckerman (1972) remarking that interviewees may attempt to anticipate what the researcher wants to hear, or adapt their responses to be viewed in a positive light. Cohen et al (2018) also urge researchers to be wary of leading questions, as these illegitimately influence the response. This affects the validity of the data. Many researchers assert that trustworthiness, through validity and reliability, should be the criteria of all

research (Yin, 1994). However, Lincoln and Guba (1985) question if the social construct of reality can ever fully be captured. This leads them to place trustworthiness as a research 'goal' rather than criteria (Ali and Yusof, 2011).Conducting a pilot with a teacher, enabled possible leading questions to be eliminated and revealed that audio recording, eye contact and taking notes of key points resulted in successful data collection (Baxter et al, 2006).

Observations

Cohen et al (2018:562) remark, 'observation is a powerful tool for gaining insight into situations'. Reasons underpinning this remark are rooted in the unique opportunity to gather live data in naturally occurring situations, allowing the investigator to grasp an understanding that cannot be achieved by asking questions (Wilkinson and Birmingham, 2003; Wellington,2015). Observations are frequently used in early years, with prominent early childhood theorists, such as Hall and Montessori endorsing observations in naturalistic settings to monitor child development (Papatheodorou et al, 2011). In this study, I observed three sessions of play (plan-do-review) and two sessions of learning through play (small group time), totalling to 6.5 hours of observation. To obtain both qualitative and quantitative data, target behaviour checklists were used, along with narrative observations records. Whilst experiencing the lived reality is the ultimate strength of observations, it also caused me to encounter many weaknesses. Observing requires understanding the significance of what we see and hear. This may involve attributing characteristics that are not directly observable but inferred from contextual information or constructed in light of our own experiences and expectations (Palaiologou, 2016); Papatheodorou et al, 2011). This can lead to bias, which in turn can result in selective attention and transcribing (Kvale, 1996). Furthermore, by simply entering the setting I influenced those being observed. This reactivity, known as the Hawthorne Effect, refers to participants altering their behaviour due to their awareness of being observed (Cohen et al, 2000). To limit reactivity, I opted for non-participant observation.

Questionnaires

In order to cross check the data, and widen the exploration of teachers' views, ten questionnaires were completed by foundation stage teachers. Questionnaires are a very useful research tool as Cohen et al (2018:471) describe them as 'cheap, reliable, quick and easy to complete'. The questionnaire took the form of a Likert scale, which allowed for numerical data, whilst still providing a degree of differentiation. However, a disadvantage is that people often tend to avoid the two extreme rating scales, so they do not come across as 'extremists' (Cohen et al, 2018). The questionnaire also contained space for an open response. This feature put the ownership of the data into the hands of the participant, and the anonymity enabled honest responses, resulting in 'gems' of information being discovered (Cohen et al, 2000). The questionnaire was piloted with a teacher and then hand delivered to ensure a high response rate (Walliman, 2006); Sharp,2012).

Sample

When selecting the sample, one has to make judgements concerning size, representativeness, and strategy. Due to the qualitative nature of the methods used, I opted for a small sample size with thirteen foundation stage teachers and twenty-four P1 pupils. Purposive sampling was used as it allowed me to handpick knowledgeable professionals, such as teachers who followed the HighScope approach (Suter, 2011). Access to the sample was negotiated with school principals (gatekeepers) (Punch and Oancea, 2014). The sample size and strategy didn't allow for generalisations, nevertheless, it enabled the collection of rich, in-depth data.

Sample for Research Method		
Interviews	Observation	Questionnaires
Teacher 1: Primary one (HighScope)	Teacher 1: Primary one	Teacher 4- 14, mixed
Teacher 2: Primary one (HighScope)	HighScope Teacher and pupils	Foundation Stage teachers
Teacher 3: Primary two (Highscope)		

Ethics

Cohen et al (2000:47) describe educational research as 'an inescapably ethical enterprise'. According to Diener and Crandall (1978) informed consent consists of four important elements; full information, voluntarism, competence, and comprehension. Thus informed consent was sought with letters outlining the nature of the study and the participants were assured anonymity and confidentiality. Due to young children's age and capacity, ethical issues are magnified (Punch and Oancea, 2014). Therefore, informed consent was obtained by parents/guardians and pupils (BERA, 2018).

Data Analysis

The analysis technique used for the qualitative data is known as 'the code and retrieve process' Haq, 2014:8). This involves identifying themes and coding them into manageable chunks. The numerical data gathered was analysed using graphs.

Chapter 4:

Presentation and Analysis

Observations

I observed five sessions of play over a two week period. Two of the sessions were small group time. The observed small group times included; using materials to create transport, exploring different smells and tastes, creating sensory bottles, and finger-painting. These observations revealed numerous of opportunities for pupils to develop their TSPC.

Small Group Time:

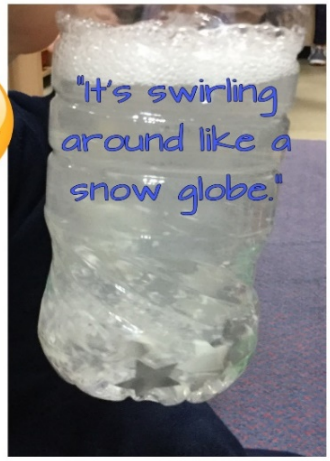
"I'm going to use my fingers to be little bits of grass."

"Feels wet."

"I'm a witch."

Pupils began with handprints. Then they started to explore 'wrist prints', 'front hand prints', and 'arm prints'.

"Ahhhh I'm turning into the Incredible Hulk."



For small group time pupils explored different smells and tastes and expressed their opinions.

Pupils got to pick if they were a 'smeller' or a 'helper'. The smellers described the smell and guessed what it was. The helpers selected the tubs and made sure the pupils followed the rules.

"Ewwww, that one is gross."

"Mmmmm smells spicy."

"This tastes like red sauce and I love red sauce."

"No cheating! You can't peak --"

"I need another lid for a seat."

Pupils displayed problem solving abilities and creativity by mixing colours to create new colours, because they didn't want to use the colours provided.

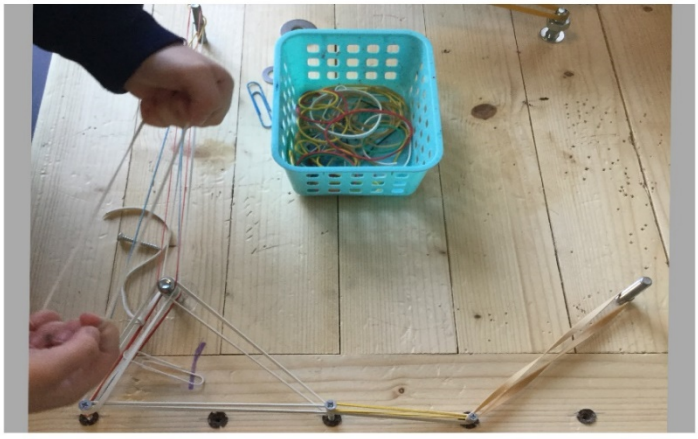
Pupils used the materials provided to design their own transport. Most of the pupils created cars using tubes, lids and glue.

Plan-Do-Review

The remaining three observations were of plan-do-review. This play provided many opportunities to develop different TSPC.

Creativity and Problem Solving

Pupils used the open ended resources to create their own games and challenges.

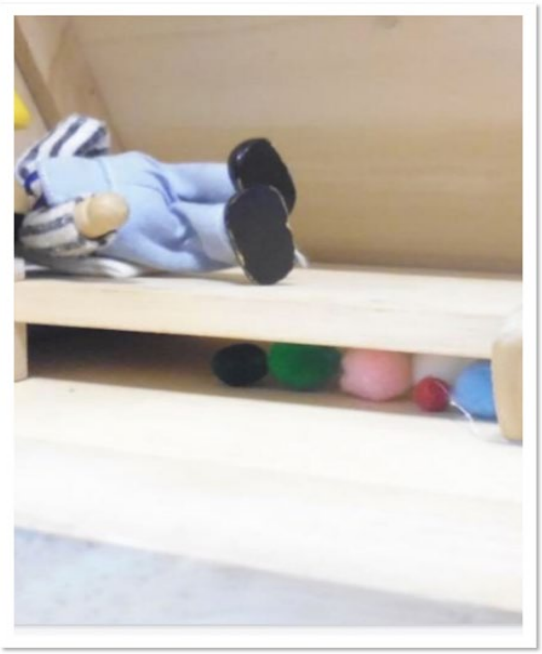


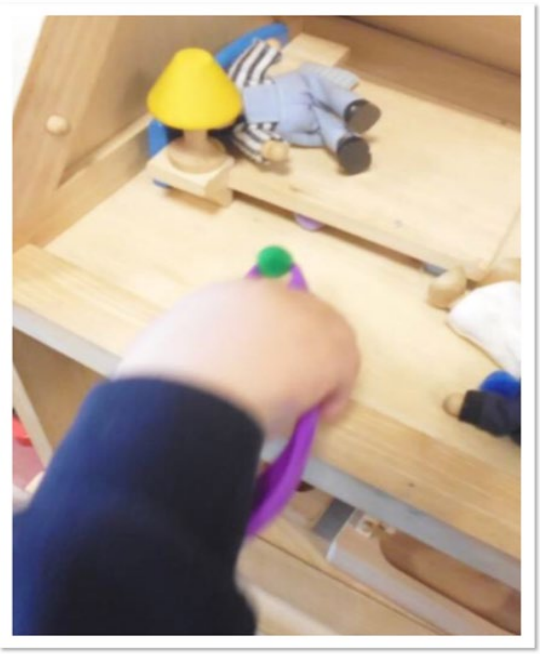
"It could be a boxing ring."

The art area was a vital area for promoting creativity.

Pupils used materials and colours to create something new.

Providing open ended resources in each area allowed the children to set their own challenges and problems to overcome.



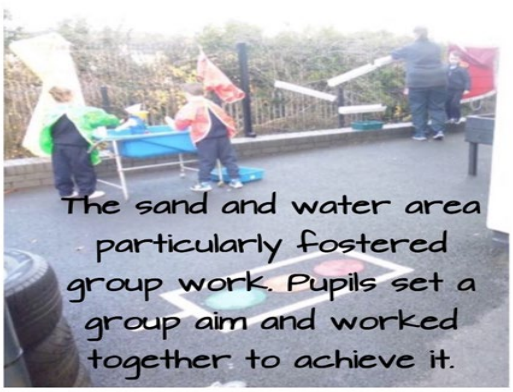


This pupil used tweezers to give her girl presents (pom-poms).But if the pupil dropped the presents or touched them with her hand they would break.

Working Together

Pupils often engaged in associative play. Playing alongside but sharing resources and often commenting on each other's work.

Other pupils engaged in cooperative play. Working together to achieve a goal. Pupil 1 and 2 shared the pieces and advised each other where the different jigsaw pieces should go.

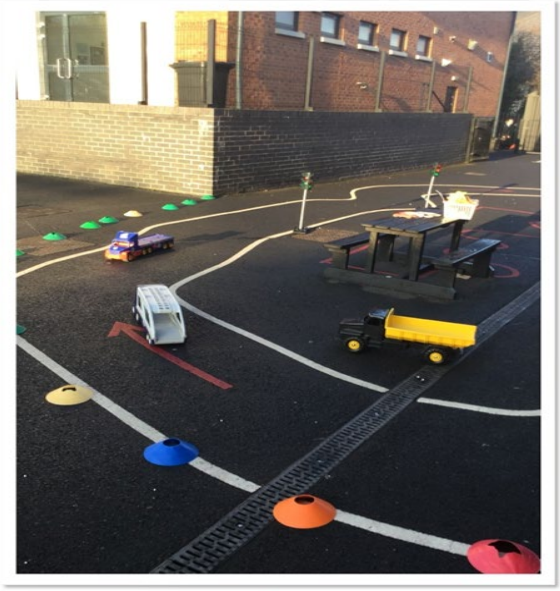


Play encouraged the pupils to develop communication and negotiation skills to solve a problem.

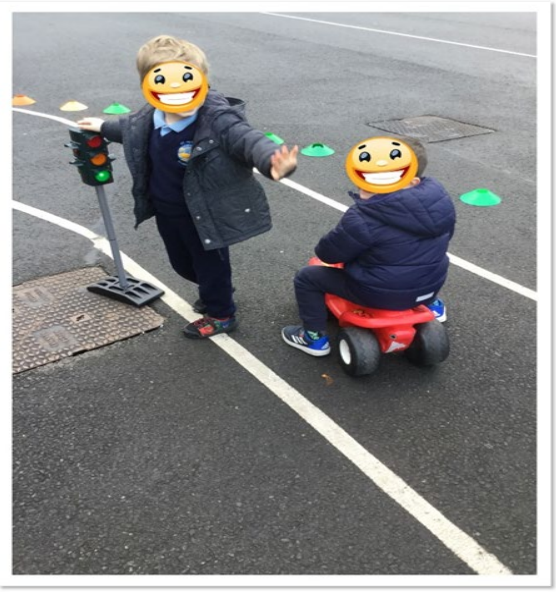
Pupil 1: "The blue car is my favourite."
Pupil 2: "If I give you the blue car, will you give me the green and the red car?"

Pupil 3: "I want that roller."
Pupil 4: "I got it first."
Pupil 3: "If you use it for a wee minute, can I take it after?"
Pupil 4: "Yea you can have it after I roll my pancake."

Pupils were playing with the traffic lights to practice their recent knowledge from world around us about road safety.



"Red light! Stop the truck!"



"It's turned green. G for green, G for go."

The pupils are exploring different roles and the emotions of others. They are acting out common social interactions and exploring the language used by different people.

"Do I have to do everything around this house!"

Pupil 1 demonstrates to pupil 2 how to make a marshmallow pizza by explaining the steps and making one alongside her.

"Set little marshmallows on, then you cut, cut, cut to get slices for everyone."

"My favourite type of pizza. Mummy made it when I was three."

Pupil 2: "I haven't heard of it before, is it nice?"

Pupil 1: "So yummy, it's just Nutella and marshmallows."

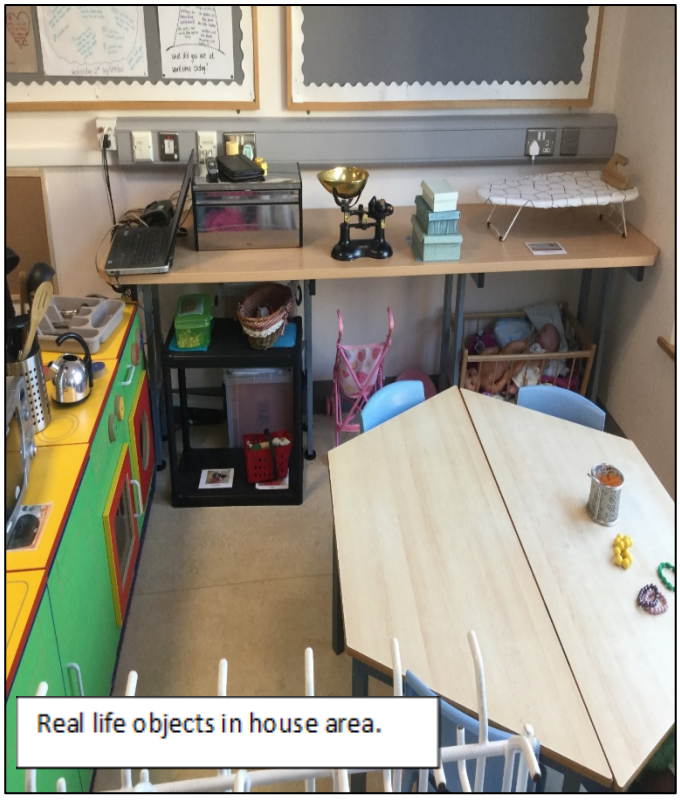
The pupil used the first aid kit to reenact his recent experience of taking his pet to the vet.

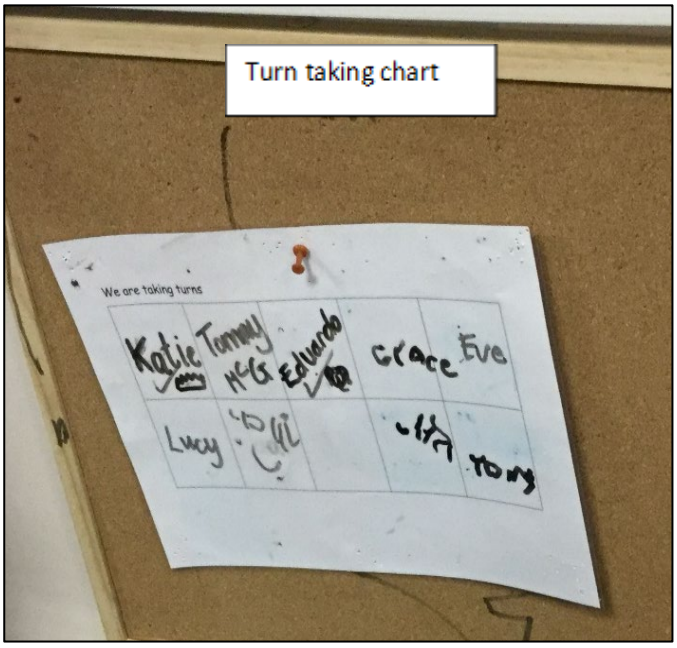
A key part of play is planning. Today Teacher A's group were using the planning cards. Pupils drove the car to the area they were going to play and explained to the group what they wanted to do today.

Pupil 1 and 2 are working together to manage information by navigating through the different sections of the interactive whiteboard game

"How about we help get the answers together"

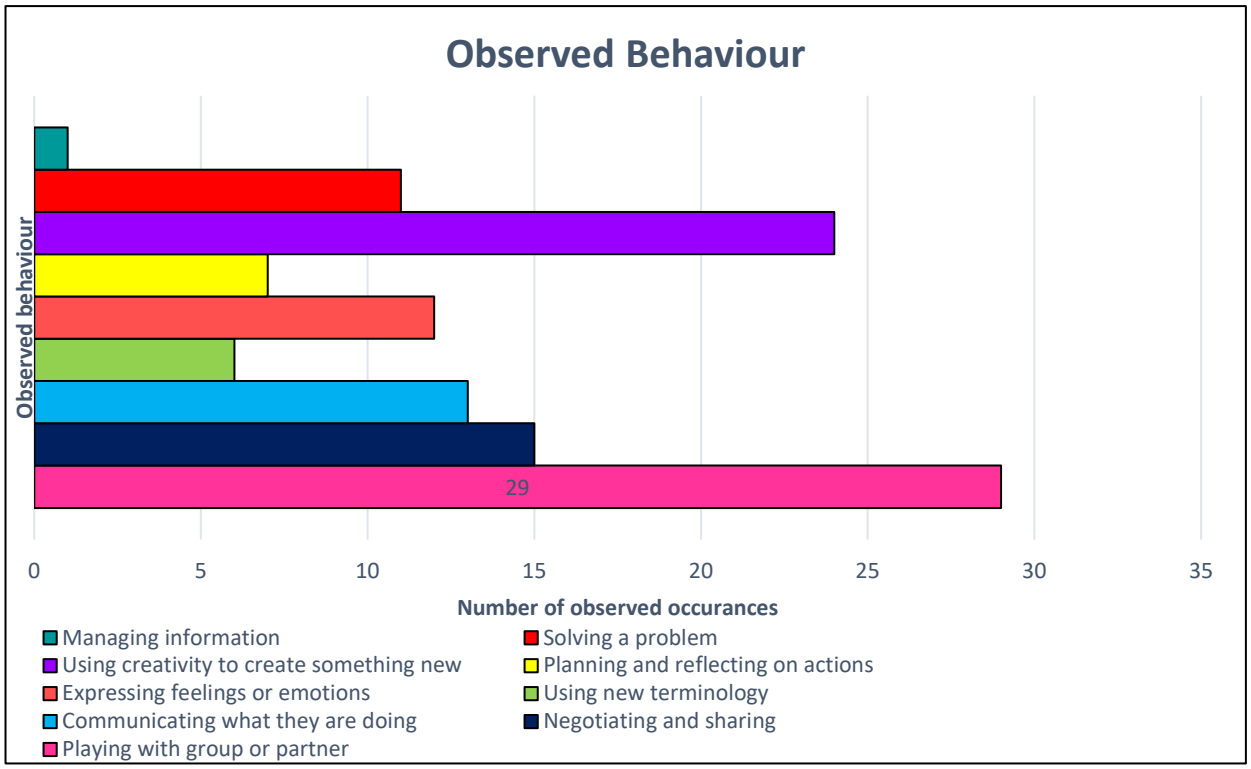
Resources and Learning Environment





Observed Behaviour Checklist:

The table below reveals how frequently different types of TSPC were observed during play.



Interviews

The results from the three interviews with the Foundation Stage teachers are grouped into similar themed questions for ease of presentation.

Benefits of a Play-Based Curriculum

Teacher 1 described play as "*vital in the foundation stage, as it is here real learning can occur".* This importance is echoed by the fact the teachers spend approximately 5.5 hours engaged in play each week. When asked about the benefits of play, Teacher 1 replied "*Play promotes holistic development. Through play children are self-managing, solving problems and taking risks. They are also playing together which enables their social and emotional tools to develop".* Teacher 2 highlighted other benefits by stating "*Children concentrate far longer on self-chosen tasks".* Whilst Teacher 3 noted *"pupils' develop holistically and develop self-confidence and concentration skills'".*

Barriers to a Play-Based Curriculum

Teacher 2 noted that some pupils find it difficult to play. Highlighting that over the years *"some children only engaged in parallel play",* whilst others were described as *"butterflies, fleeting between areas but never engaged long enough to progress".* On the other hand, Teacher 1 and 3 noted that "*whilst a lot of time, energy and focus is put into play, there is no standardised or efficient tool promoted by the EA for assessing and monitoring it*". The interviewees explained the difficultly with this is the school is spending over £1000 on 'SeeSaw' for monitoring play and as these apps are made in England, they are not suited to the NI curriculum. However, the barrier presented by all teachers was budget reductions. Budget reductions impact on manpower as it is taking away teaching assistants required to manage the different activities, which is making teachers unavailable *"for children who need that one-on-one support*". Teacher 1 noted "*taking away this manpower in foundation stage will eventually revert the curriculum to chalk and talk"*. Moreover, budget reductions are effecting resources. Interviewee 1 commented "*in order for children to have a wide range of experiences we need to provide a wide range of resources".* However, schools do not have the funds to update resources to suit the topic or children's interests, so providing these resources is coming out of the teacher's pocket.

Importance of TSPC

Following the HighScope Approach, Teacher 1 indicated the content is always child initiated and adult supported, so encouraging TSPC is embedded into the daily routine of the school. Teacher 2 commented that in "*HighScope children are involved in the decision making process, especially when solving a problem or a conflict, which develops independence and decision making".* The teachers also promoted TSPC by encouraging pupils to look after their belongings and have resources accessible so pupils can get what they need and tidy up after themselves.

TSPC in Play

The interviewees expressed a firm belief in the importance of play in fostering the development of TSPC. According to Teacher 1, "*play is all about communicating. Play supports pupils in their vocabulary development as they can explore new words in a stress free and meaningful context.* She added, "*last week we wrote down all the things we can do during play, and this was introducing verbs".* Likewise, Teacher 2 emphasised that communication and social skills were fostered by playing together. Children are learning from one another and learning to take turns and share equipment.

Furthermore, Teacher 1 pointed out "*when children are playing they are experimenting with ideas, learning from their mistakes, and taking control of their own learning*". *Likewise, Teacher 3 commented "play-based learning encourages pupils to become curious learners".* Moreover, Teacher 2 reiterated that "*Following plan-do-review encourages pupils to become self-directed and enables ownership of their learning*". Teacher 2 noted that self-management was particularly developed as *"pupils have choice and are free to move around the areas".* However, Teacher 2 implied that "*managing information was not so evident in play*", because it is only apparent when navigating through an interactive game.

According to Teacher 2, the art and block area are particularly effective in developing creativity and problem solving. Teacher 1 proposed that "*When adults provide open-ended resources children will set their own challenges, which adults can support. The aim of effective questioning is to make children's thinking visual".*

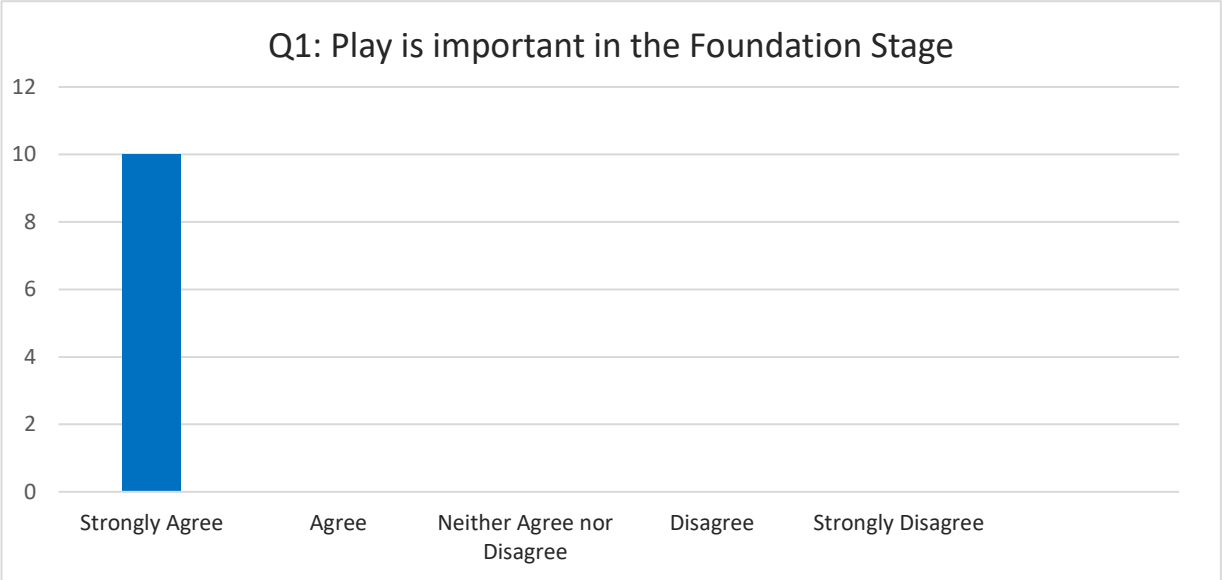
How Teachers Support the Development of TSPC through Play

Teacher intervention was addressed by Teacher 1 when she stated, "*We use SOUL-silence-observation-understanding-listening to decide when and how to support children during their play*". The teachers explained that they use CCEA Think Pack questioning techniques to extend thinking and effective open-ended resources like the loose parts area. Other resources include, turn taking boards,

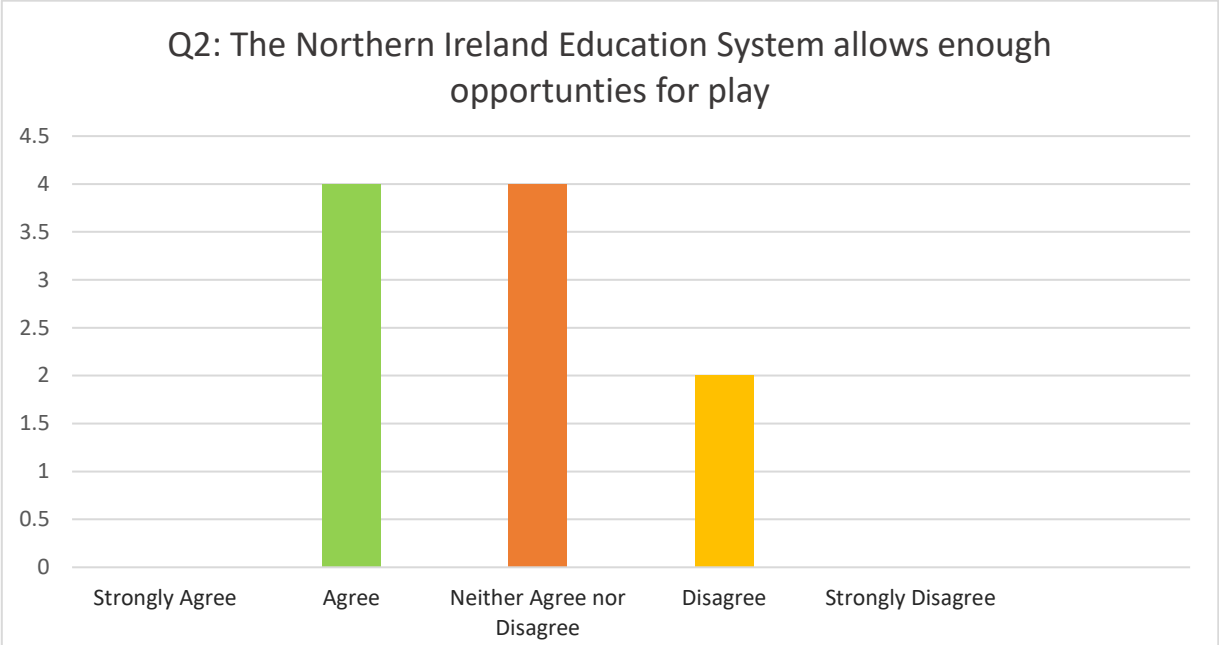
5 minute timers and planning cards. It became apparent that their play planning was focused on TSPC, using a blank sheet at the start of the year and developing activities to suit the children's needs and interests. Thus, despite engaging in forward planning, these plans were a working document, flexible to adapt, and constantly changing.

Questionnaires

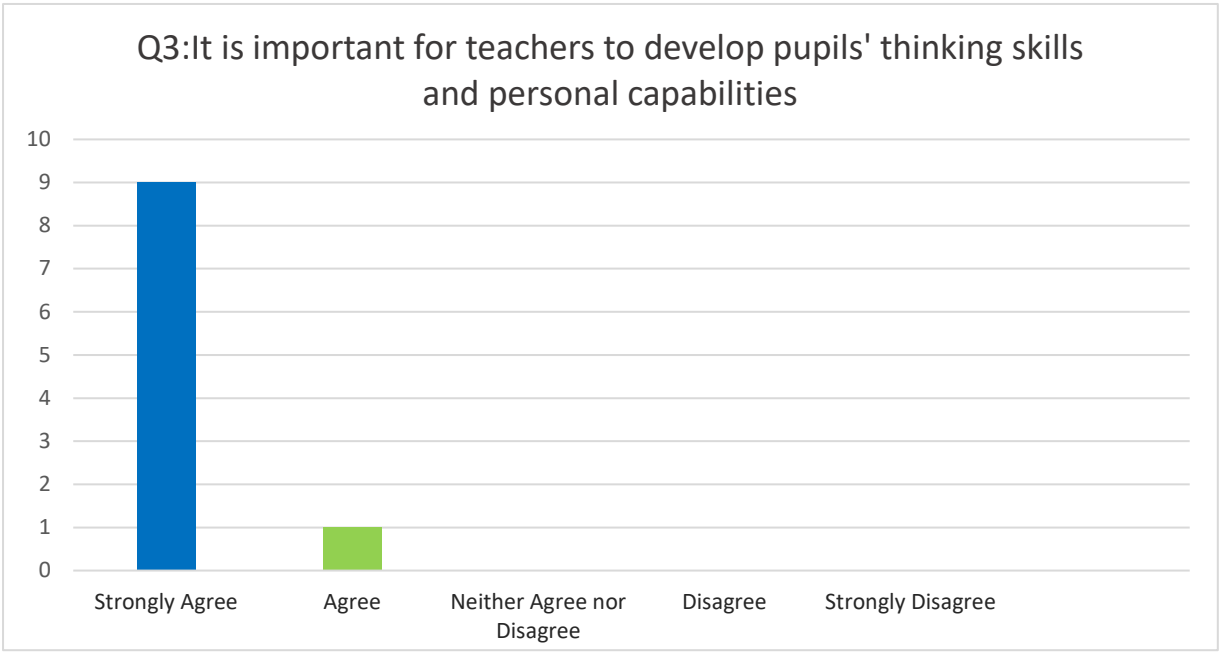
The results reveal the different polls of opinion among ten Foundation Stage teachers.



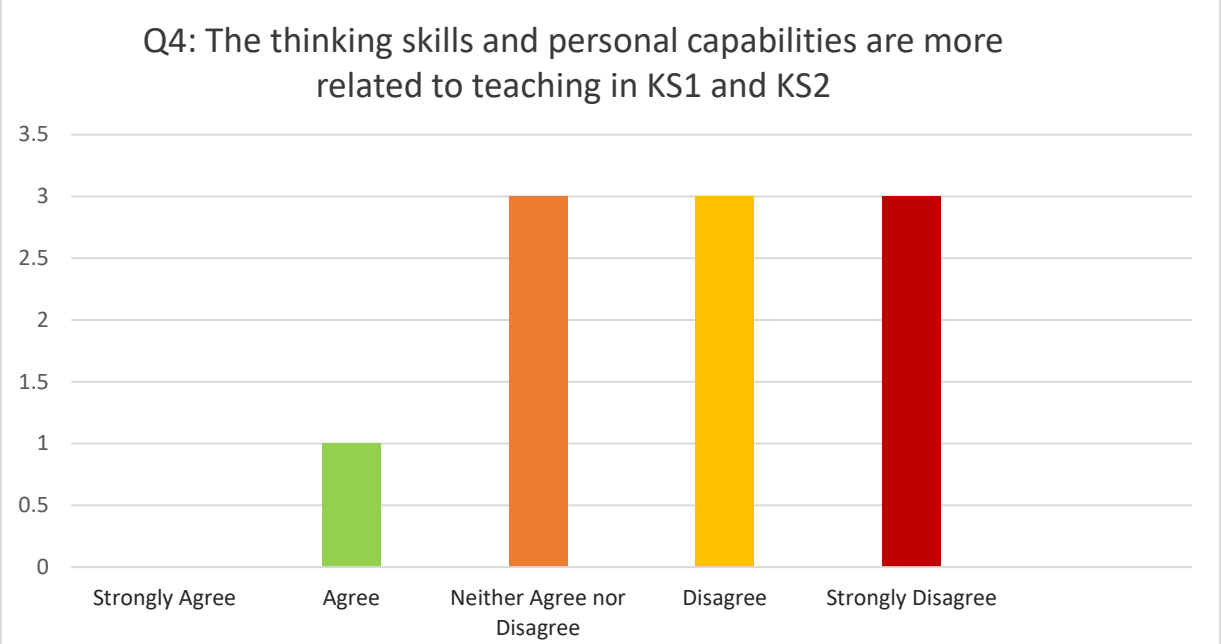
All participants agreed that play was important, with Teacher 4 adding "play is essential for children's development process", whilst Teacher 5 stated 'children are playful by nature so this must be evident in their learning'.



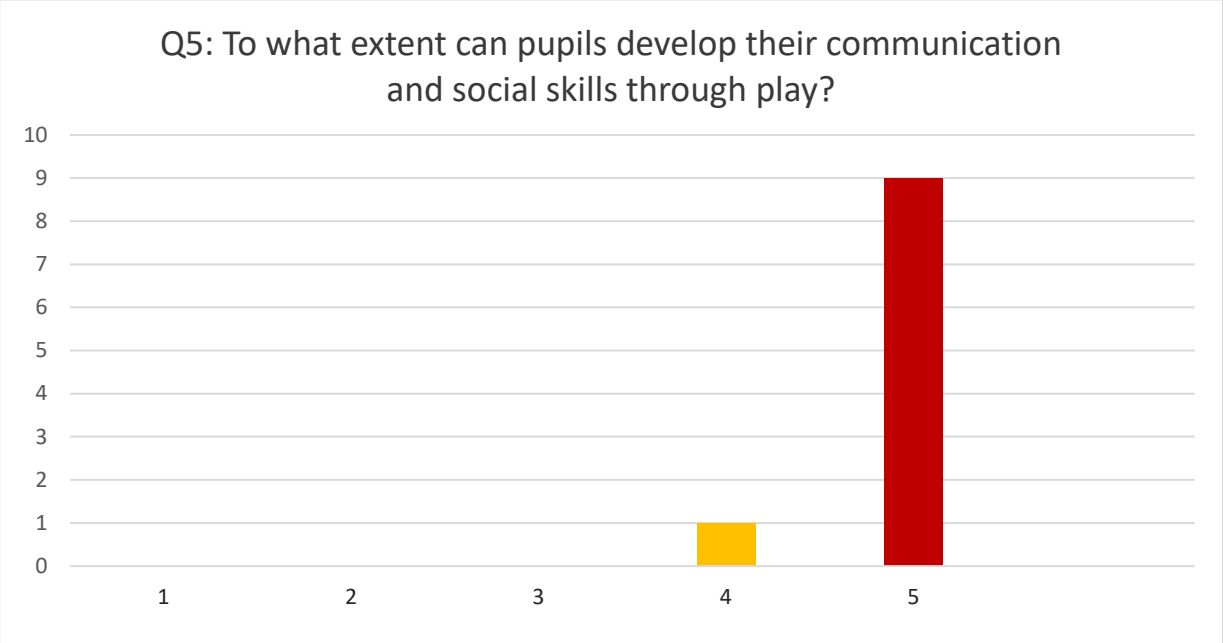
This question divided opinions of teachers. Those who agreed stated 'We play every day and learn numeracy and literacy through planned play activities' (Teacher 5). Others noted that 'in FS there is a demand for play, but this decreases with age' (Teacher 8). Whilst Teacher 6 highlighted 'I have found that schools are often the ones that don't place enough importance on play'. On the other hand, Teacher 7 stated 'compared to European education systems, Northern Ireland remains very academic based, with no real focus on play'.



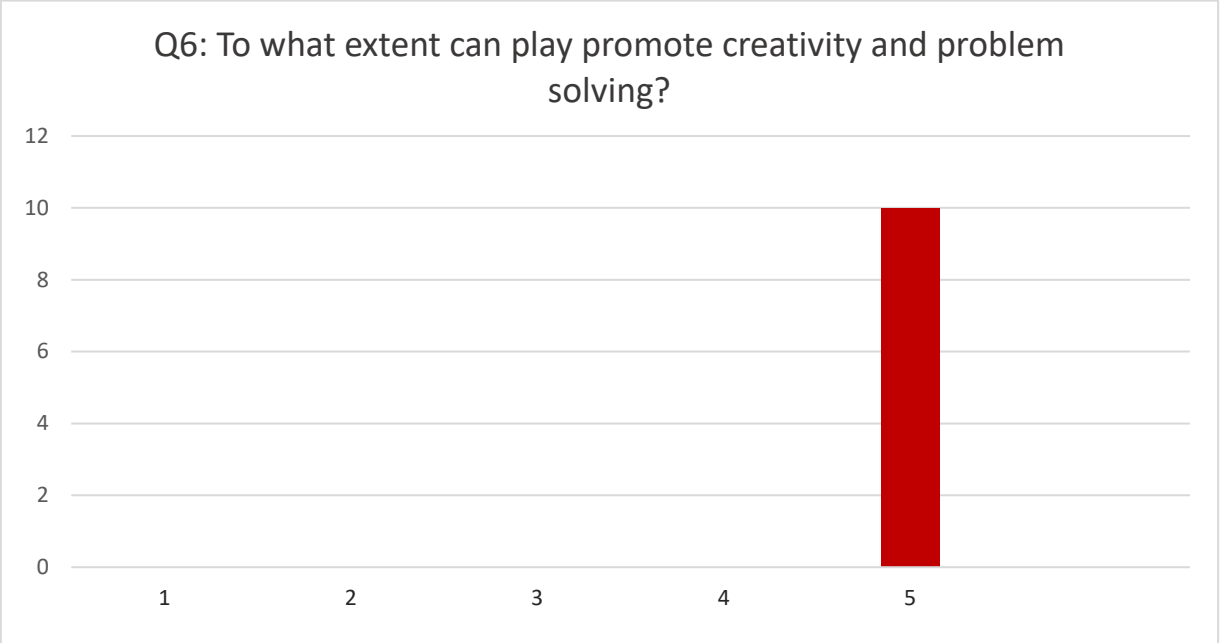
Teacher 8 commented 'Children that can think critically and discuss during play are far more likely to use these skills in academic work'. Similarly, Teacher 5 wrote 'you want pupils to question and think about concepts.



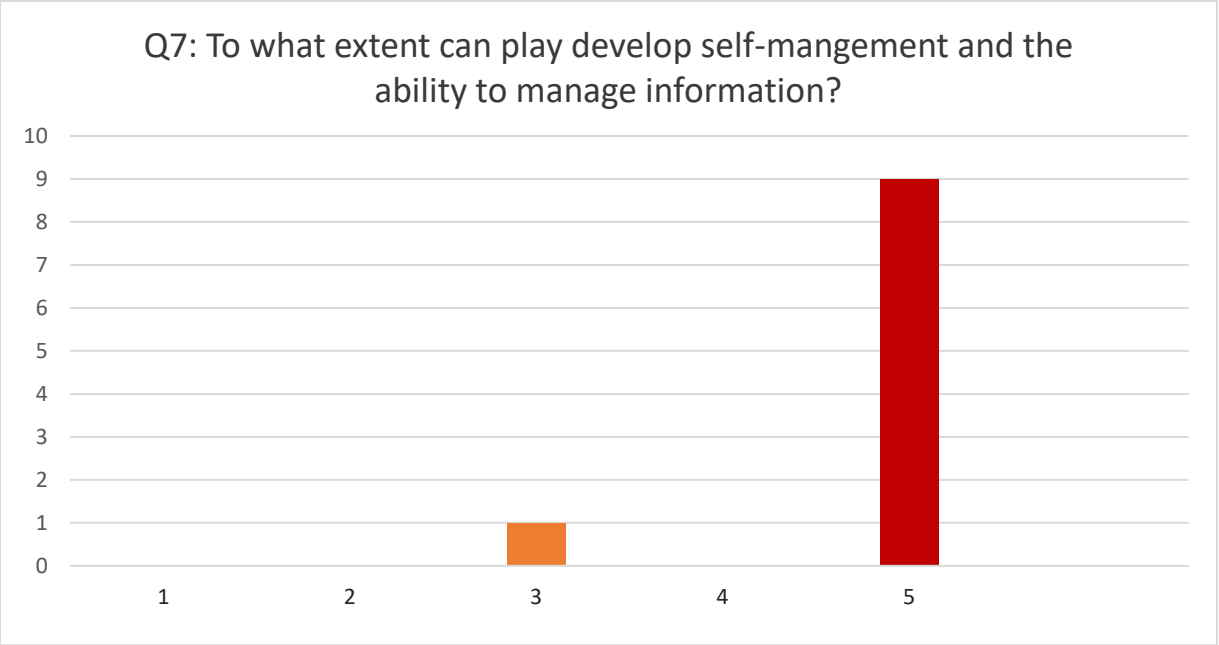
Teacher 4 noted 'Foundation Stage provides the foundation for these skills'. Similarly, Teacher 9 pointed out 'regardless of age, a child is going to think, so teaching must adapt to this'. Teacher 10 stated 'TSPC are the focus of our daily and weekly plans'. However, Teacher 11 who 'agreed' did not leave a comment.



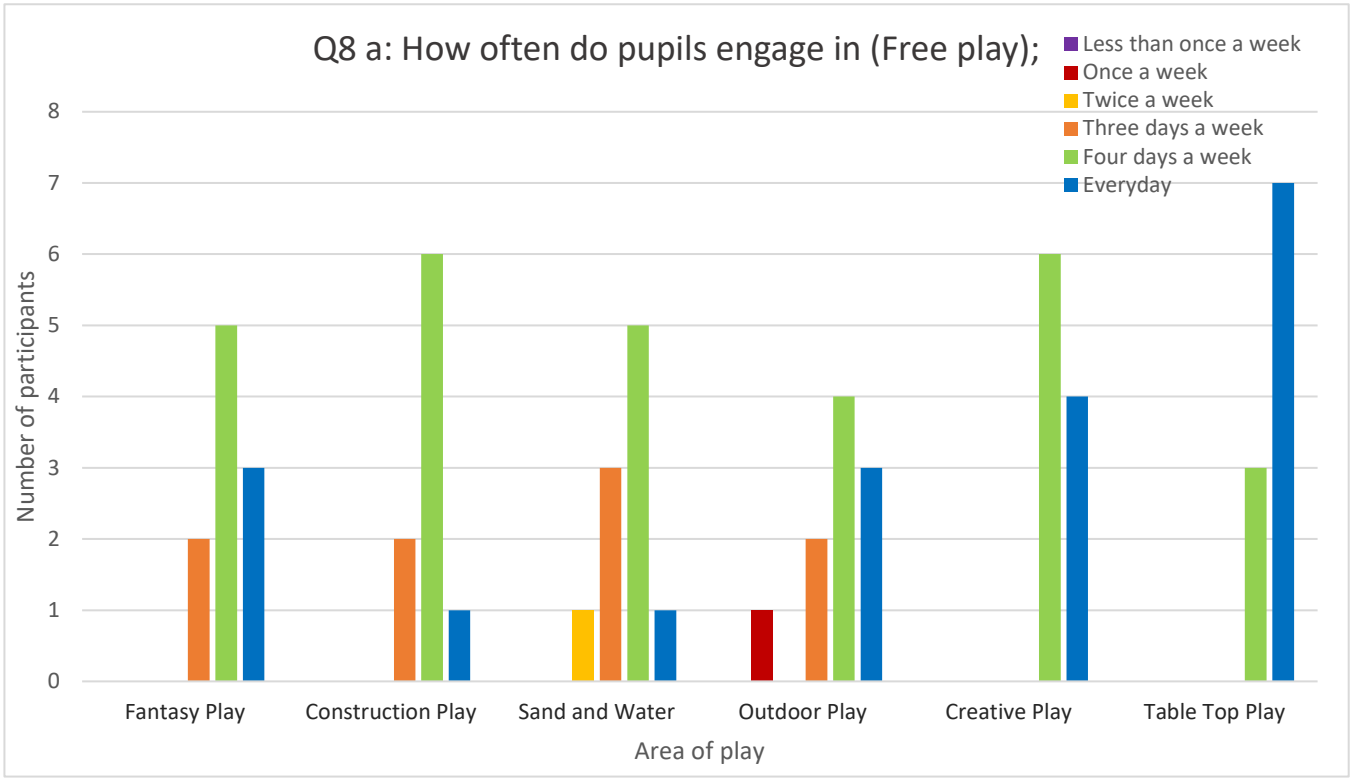
According to Teacher 6, 'play provides lots of opportunities to enhance these skills, especially with adult questioning'. Teacher 9 highlighted that the extent depends on the area of play and the personality of the child.



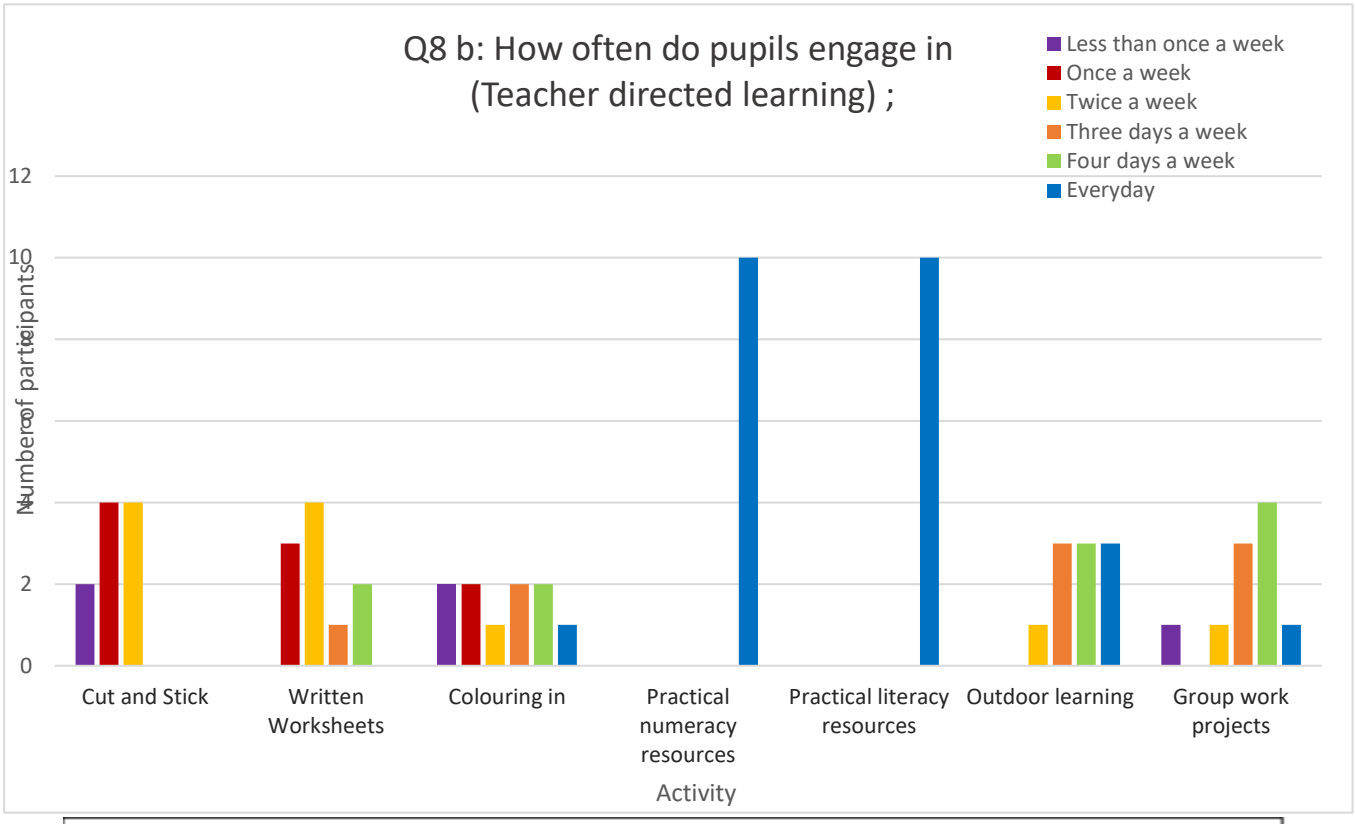
Teacher 8 commented, 'By keeping play areas open-ended with no end product, these skills occur naturally'. Similarly, Teacher 12 stated 'small world play is creative by nature, whilst construction is a great area for fostering problem solving.



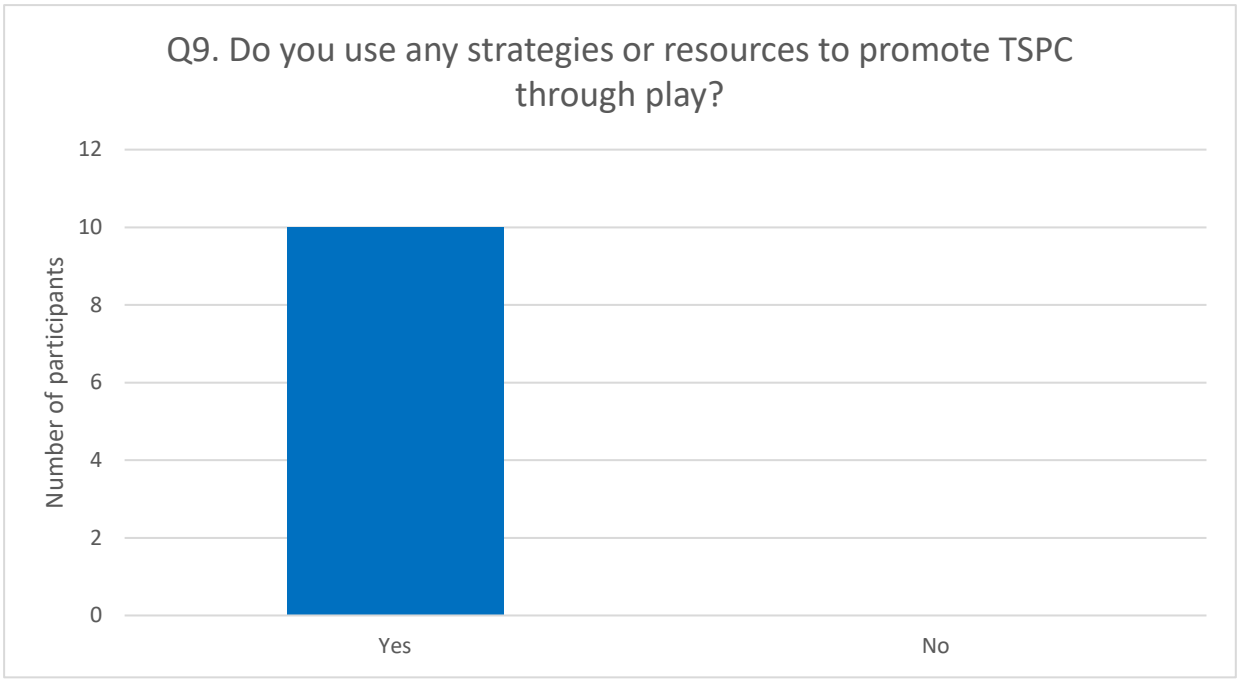
Teacher 12 commented, 'children must self-manage their movement to and within areas'. However, Teacher 9 believes 'Play is focused upon imagination rather than information'.



Results reveal that most teachers engage in the different areas of play four days a week. With creative and table top play being practiced frequently, whilst the frequency of sand/water and outdoor play varies significantly.



All participants agree on the value of practical resources. However, there is a huge divide in the poll of opinion with regard to the value of all other learning activities.



Some teachers focused on resources. Teacher 4 noted, 'all resources are intended to develop TSPC, otherwise, they have no value'. Teacher 8 commented, 'We set up challenges and problem solving activities as part of the play sessions'. Similarly Teacher 7 added, 'Practical hands on resources are key to developing TSPC'. She furthered this by stating, 'Turn taking, choice games and timers useful in fostering personal capabilities'.

Other teachers focused on intervention. Teacher 10 highlighted, 'I intervene in play to extend their learning by asking open-ended questions and posing a problem'. Likewise, Teacher 5 noted 'I listen to how the pupils are playing, then I try to extend their storyline by introducing a new problem.'

Others focused on how they planned for play. Teacher 6 indicated that constantly changing the play areas each week to suit the topic and introducing new resources helps extend pupils play and practice what they learned in teacher led activities. She thought that sticking rigidly to a long-term planner can be very restrictive as play by nature is spontaneous so this should be reflected in how teachers plan for play.

Analysis

Benefits of Play on Pupils' Development

Thinking Skills:

The data retrieved revealed the holistic nature of play, by exposing its inherent opportunity to develop creatively, socially, cognitively and emotionally. These findings mirror the previously addressed comments of Wisneski and Reifel (2012), who note that play is fundamental to the domains of the whole child. The results reveal that cognition, specifically, thinking skills is a prominent domain developed through play. The particular thinking skills continually addressed were creativity and problem solving. Aljarrah (2017: 31) coins the phrase 'the art of expanding possibilities', because the play setting is all about possibilities; exploring with materials to create dolls, mixing paint to create new colours and creating their own challenges to overcome (observations). Results uncovered that one reason these skills flourish during play is because pupils are in an environment of active exploration which harnesses their natural curiosity and thus creates flexible thinking. Similarly Roeper and Ruff (2016) comment that a climate of open-mindedness and independent thought allow for these thinking skills to thrive.

Social and Communication:

When analysing results, the social nature of play soon became apparent. Play enabled pupils to practice social interactions, such as cooperation, sharing and negotiation, for instance, negotiating over the cars in the small toy area. According to Nahmad-Williams (2012) learning these social rules and behaviours in play teaches children how to communicate and make friends. Observations allowed insights into the social function of roleplay, as pupils were re-enacting experiences, and exploring the emotions and consequences in a safe environment (Barton et al, 2018). In addition, as the pupils were taking on different roles, for example, 'the busy mother', Isaacs (1885-1948) supported by Singer and Singer (1990) claims that this forms a preparation for future realities. It was apparent that the roleplay and sand/water area provide a fertile ground for cooperative play. In these areas pupils worked

together to achieve a common goal (Bennett and Palaiologou, 2016). Another key discovery was Vygotsky's (1978) 'Zone of Proximal Development' in action. This is a learning model highlighting the distance between a pupil's actual developmental level and their potential level when supported by an adult or more knowledgeable peer. When pupils engaged in cooperative play, e.g. the playdough area, the pupils were learning from one another, jointly constructing their new understanding.

Self-management:

A theme that permeated throughout the interview responses was pupils taking responsibility for their own learning. The teachers shed light on the fact that children concentrate longer on self-chosen tasks. According to Whitebread (2003), this is because with enjoyment comes concentration. As revealed previously by Theobald et al (2015), pupils value having choice over their activities. Play allows choice and responsibility, which in turn instils intrinsic motivation and positive attitudes towards learning. Both observations and questionnaires revealed that children have the choice to move around the areas, enabling them to become self-directed learners. This is reinforced by Feeney et al (2006) who point out that this enables pupils to learn how to set and follow plans.

Barriers to a Play-Based Curriculum

Budget Reductions:

Results reveal that budget reductions pose a serious threat to a play-based curriculum. This concern was echoed in the Chief Inspectors Report (ETI 2018:11) who states 'difficult budgetary restrictions are biting hard' as today's education budget has decreased by £233 million since 2010. One of the knock on effects of these reductions is decreasing manpower within the schools. In the interviews the teachers noted that due to a lack of manpower, they struggled to provide one-on-one support to pupils who needed it. Webster (2018) supports this claim as approximately 6600 Teaching Assistants lost their jobs in 2017 because of reductions, thus, indicating that schools often do not have enough staff to support play-based learning. Another connected issue was lack of resources. Grubb and Allen

(2010) argue that money does not educate children, however, Lambert (2018) believes that providing effective resources is an important part of teaching, and these are often the first thing effected by budget reductions.

Impact of School Policy:

The research indicates that school policy and approach is influential in promoting or inhibiting play. According to Walsh et al (2010), if a school values play, then this playful tone steeps into teacher-directed activities. This was clear as all teachers used practical resources, however, it showed varied school value on group activities and outdoor learning, which indicates that many schools policy's don't explore the true value of play. Results show that following an approach, like HighScope can unlock the potential of play. An underpinning component of the HighScope approach is the belief that child-initiated, active-participatory learning is fundamental to the development of the child (French, 2012). The Teachers' view of plan-do-review is echoed by Marsden (2012) who highlights it develops pupils' capacity to think, plan and reason, whilst O'Flaherty (1995:53) states it turns 'impulse into purpose'. Thus, a strong school approach like the HighScope or implementing a play policy is necessary for play-based learning to reach its potential.

Devaluation of Play:

The Northern Ireland stance on play created different polls of opinion. Some teachers stated that unlike many European education systems, play in NI was simply an add-on. Walsh et al (2006) suggest this is because assessment pressures cause the over focus on literacy and numeracy to stream down to the early years. Although, it could be argued that since 2007 CCEA are advocating more play, as all teachers played approximately '4 days a week'. It was also noted that it is schools who don't value play. This may be reflective of parental attitudes to play. With regards to academic work, many parents believe 'the earlier the better' (Wood and Attfield, 2005). Underpinning this is Thomas' (1994) belief there is no point coming to school unless children are academically learning. However, a web of research, including that of Suggate et al (2013) on the impact of reading starting age, indicates that

this untrue and potentially damaging for pupils. Likewise, Whitebread (2013) warns against the 'too much too soon' approach in schools. Schools should recognise that play-based learning does not negatively affect the school standard as the ETI inspectors report 2013 for the HighScope School in this study received 'Outstanding' across the broad. Whilst, Schweinhart et al's (1993) longitudinal study on HighScope indicated that those who received a play-based approach academically outperformed those who did not.

Teachers

Intervention:

It is evident that the teachers valued facilitating play to extend and direct the pupils thinking. Hendy (2003) notes that this is important because with each intervention comes varied learning opportunities. The observations revealed that teachers used SOUL-Silence-observation-understanding-listening to decide if it was appropriate to intervene and then used Moyles' (2010) play spiral to extend learning. Another key finding was the use of open-ended questioning to develop possibility thinking. This echoes the belief of Marsden (2012) who explains that children of any age can be taught to think by recognising thinking as a set of skills to be learned rather than an internal thought process. This is backed by CCEA (2007b:14) who claim that questioning is key to making thinking important.

Environment and Resources:

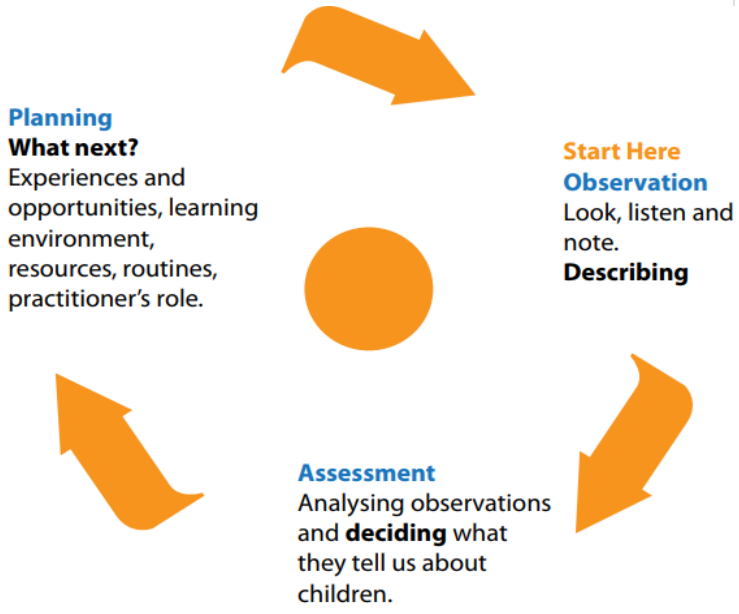
The learning environment was very influential on pupils play. The teacher created a warm and caring climate e.g. 'the cosy corner'. This is vital as children need to feel safe and secure to be empowered to explore their surroundings and take risks, Hargreaves (2012). This is grounded in Maslow's Hierarchy of Needs (1943) which reveals pupils need to feel safe in order to reach their full potential. Furthermore, open-ended resources were pinnacle to a stimulating environment. This was particularly evident in the 'loose parts' area based on Nicholson's (1970) research. According to Canning (2018:46)

'a flexible environment creates flexible children who can adapt and be resourceful in other situations'. Thus, nurturing independent learners.

Planning:

The teachers' approach to planning was an interesting discovery. This connected to the very topical debate over 'in the moment' vs 'long-term' planning. Whilst many are advocates of long-term or objective led planning for play because of its standardised learning outcomes (Chilver, 2016:17) warns that planning littered with set outcomes can result in a disconnect between pedagogy and the child, as play becomes 'hot-housed to reach adult set goals'. On the other hand, 'in the moment planning' is based on the idea that children live in the here and now. It requires no forward planning, but seizes teachable opportunities in interactions, Ephgrave (2018). The theme of child-centeredness permeated throughout teachers' middle-ground approach, as the pupils reaped the rewards of experiencing effectively planned and resourced activities, which remained flexible to adapt to the needs and interests of the child.

Fig 3, The National Strategies Early Year (2009:22)



Similar to *Fig 3*, the teachers observed the pupils to discover their interests and areas requiring development. Then they adapted their plans by changing the resources, learning environment and activities to suit the children's needs.

Chapter 5:

Discussion and Conclusions

Discussion and Conclusions

Teacher's Views of Play

This exploratory study illustrates the value of play as a powerful mechanism for learning. Analysing results lead to the irrefutable conclusion that play and learning are two sides of the one coin. As children are playful by nature, this is inevitably reflected in how they learn. This mirrors the vast findings of early years theorists, like Nahmad-Williams (2012:124) who refers to play as 'the highest and most natural form of learning'. This study sought to uncover teachers' views of play. Although teachers are obliged to engage in play as it is enshrined in the curriculum, the teachers didn't simply promote play because they had to, but because they wanted to. All the teachers recognised the inherent value of play. This was reflected in their enthusiastic responses as the thirteen teachers involved in this study classed play as vitally important, and understood how play fostered the development of TSPC. In this case, the research findings refuted the literature as Hunter and Walsh (2014) identify teachers' attitude and skill as the barrier to play-based learning, however, my findings indicate that teachers were a power catalyst who promoted rather than inhibited play, and the barriers to play lie elsewhere.

Play and the Development of TSPC

One of the uncovered benefits of play was the cohesive link between theory and practice with regard to the direct hands-on learning experienced in play. Brierley (1994:111) highlights the 'brain thrives on variety and stimulation', information comes to the brain through the five senses, thus play is one of the only forms of learning that employs all the senses through active engagement with the world. What was particularly evident in this study was the ability for play to act as integrating mechanism, pursuing the development of the whole child. Hence, highlighting its role in fostering TSPC, which are important life skills to be developed through the medium of play.

Although each strand of the TSPC were addressed during play, the extent and the means of the development varied significantly. In the case of self-management, theory corresponded with practice as French (2012) and Wood and Attfield(2005) believe learning stems from a child's attempt to pursue personal interests and goals in play. Practice reflected this literature, because the pupils became self-directed learners, planning their own tasks, materials and goals. Observations revealed that self-management was also evident through fantasy play as it allowed pupils to reflect on experiences and learn to regulate their emotions.

Another aspect of TSPC that was undeniably evident was 'working together'. Social and communication skills permeate through all aspects of play however, results reveal that sand/water, small-world and role-play areas particularly encouraged cooperative play as children worked together, developing social skills in the process. Furthermore, just as teachers used play to introduce new language, Bruce (2004) highlights that play offers a place pupils can develop language in a meaningful context.

Moreover, in the case of creativity and problem solving, Robson (2012:36) claims play 'provides the strongest context for problem solving and extending their thinking'. The play environment is one of possibility and trial and error. Pupils' freedom in play to explore 'what can I do with this object' forms the foundation of possibility thinking. This is fostered particularly in the art area, block area and the 'loose-parts' area.

The only finding which was not backed by literature was the lack of 'managing information' compared to other skills and capabilities. This finding occurred across all three data collection methods.

Recommendations for teachers

In today's technology saturated world, most of children's free time is spent watching TV or playing on iPads, thus promoting play is becoming increasingly important. Children have a natural propensity to learn through the medium of play. Therefore, it is the role of the teacher to facilitate this. The starting

point comes with taking play seriously, recognising that child-initiated play can still achieve the adult-initiated curricular objectives (Broadhead and English, 2005). Key to fruitful play is preparation. Teachers should provide open-ended resources and activities as Nahmad-Williams (2012:133) stresses this allows children to 'transform them into whatever their ideas, experience and imagination what them to be'. Moreover, theory and practice reveal that teachers should gauge the pupils' interests to provide resources that suit them.

As well as this important forward planning, play requires teachers to live in the moment, to seize learning opportunities as they arise through sensitive intervention. Walsh et al (2007) note that teachers who are successful in extending TSPC are those who are proactive in shaping learning experiences. This is done by using phrases like 'put your thinking caps on' and giving pupils time to think of ideas. To enable this thinking to flourish, theory and practice indicate a nurturing ethos is fundamental to pupils ability to take risks, thus teachers should always encourage pupils to have a go and praise all attempts rather than over focusing on right or wrong answers (Robson, 2012).

Additionally, there is no one pedagogy of play, hence, schools have different policies and approaches. Early years practitioners should ensure that these policies emphasis a play-based approach as the Northern Ireland School starting age is younger than the rest of the UK and Europe, so a solely formal approach to would be potentially detrimental for pupils.

Aims and Limitations

Having reviewed this exploratory study it is evident that there were limitations which consequently affect the overall outcome of the investigation. Firstly, time restraints restricted the sample size, thus the findings are not representative, which, in turn means generalisations cannot be made. Moreover, play is a very broad pedagogy with many different approaches in practice. As the observations occurred in a HighScope school, this influenced the schools approach to play, so this practice may not be representative of schools following different approaches or policies. Thus, future studies could examine how different school policies/approaches impact play. Through evaluating this study, it is

apparent the study aims have been achieved, as the data collected informs the three research questions I sought to answer. Moreover, this investigation has deepened my understanding of the benefits and short-comings of using play to develop TSPC, and has added to the body of literature, which is particularly useful for teachers in Northern Ireland due to the lack of literature addressing TSPC in the early years.

References:

Ali, A. and Yusof. H. (2011). 'Quality in Qualitative Studies: The Case of Validity, Reliability and Generalizability'*. Issues in Social and Environmental Accounting*, 5(1), pp25-64.

Aljarrah, A. (2017). 'Play as a manifestation of Children's Imagination and Creativity'. *Journal for the Education of Gifted Young Scientists,* 5(1), pp-23-36.

ATI. (2000). '*The Power of Play'*. Factsheet. New York: ATI.

Ball, C. (1994). *'Start Right: The Importance of Early Learning'*. London: RSE.

Barton, E.E., Ledford, J.R., Zimmerman, K.N. and Pokorski, E.A. (2018). 'Increasing the Engagement and Complexity of Block Play in Young Children'. *Education and Treatment of Children*, 41(2), pp169-196.

Basit, T, N. (2010). '*Conducting Research in Educational Contexts'.* London: Continuum.

Wisneski, B. D. and Reifel, S. (2012). 'The Place of Play in Early Childhood Curriculum'. In: N. File., J. Mueller., and D. B. Wisneski, (eds.), *Curriculum in Early Childhood Education. Re-examined, Rediscovered and Renewed,* 1st Ed. New York: Routledge. Pp 174-187.

Bassey, M. (1999). '*Case Study Research in Educational Settings'*. Buckingham: Open University Press.

Baxter, L., Hughes, C. and Tight, M. (2006). '*How to Research'*. 3rd ed. Buckingham: Open University Press.

BERA Early Years Special Interest Group. (2003). *'Early Years Research: Pedagogy, Curriculum and Adult Roles, Training and Professionalism'*. Southwell: BERA.

Bennett, J. and Palaiologou, I. (2016). 'Personal, Social and Emotional Development'. In I. Palaiologou. (ed*.), The Early Years Foundation Stage Theory and Practice*. 3rd ed. London: SAGE. Pp.345-365.

BERA. (2018). '*Ethical Guidelines for Educational Research'*. 4th ed. London: BERA. Available online at: https://www.bera.ac.uk/wp-content/uploads/2018/06/BERA-Ethical-Guidelines-for-Educational-Research_4thEdn_2018.pdf?noredirect=1 [accessed 8/11/2018]

Bernstein, B. (1973). *'Class, Codes and Control: Theoretical Studies towards a Sociology of Language'.* London: Routledge and Kegan Paul.

Brannen, J. and Moss, G. (2012). 'Critical Issues in Designing Mixed Methods Policy Research'. *American Behavioural Scientist*, 56(6), pp 789-801.

Brierley, J. (1994). '*Give Me a Child Until he is Seven'.* 2nd ed. Lewes: Falmer Press.

Broadhead, P. and English, C. (2005). 'Open-ended Role Play: Supporting Creativity and Developing Identity. In: J. Moyles. (ed.), *The Excellence of Play*, 2nd ed. Berkshire: Open University Press. Pp72-86.

Bruce, T. (2004). '*Developing Learning in Early Childhood'*. London: Paul Chapman Publishing.

Bruce,T.(2005). 'Play, the Universe and Everything'. In: J. Moyles. (ed.), *The Excellence of Play*, 2ND ed. Berkshire: Open University Press. Pp255-267.

Bruce, T. (1991). *'Time to Play in Early Childhood Education'*. London: Hodder and Stoughton.

Bruner, J. S. (1966). '*Toward a theory of instruction*'. Cambridge, Mass: Belkapp Press.

Bruner, J.S. (1972). 'The Nature and Uses of Immaturity'. *American Psychologists*, 27(8), pp.687-708.

Canning, N. (2018). 'Where's the bear? Over there! Creative thinking and imagination in den making'. In: G. Goodliff, N. Canning, J. Parry and L. Miller, (eds.), *Young Children's Play and Creativity. Multiple Voices*. 1st ed. New York: Routledge. Pp.35-48.

Carter, R. (2002). '*Consciousness'*. London: Seven Dials.

CCEA. (1999). *'Developing the Northern Ireland Curriculum to Meet the Needs of Young People, Society and the Economy in the 21st Century*.' Belfast: CCEA.

CCEA. (2007). *'The Revised Northern Ireland Curriculum'.* Belfast: CCEA.

CCEA. (2007b). '*Thinking Skills and Personal Capabilities for Key Stage 1&2'*. Belfast: CCEA.

Chilver, D. (2016). *'Playing to Learn: A guide to child-led play and its importance for thinking and learning'.* London: ATL.

Cohen, L., Manion, L. and Morrison, K. (2000). *'Research Methods in Education'*. 5th ed. New York: Routledge Falmer.

Cohen, L., Manion, L. and Morrison, K. (2018). *'Research Methods in Education'*. 8th ed. New York: Routledge.

Craft, A. (2001). 'Little C Creativity'. In: A. Craft, B. Jeffery and M. Liebling, (eds.), *Creativity in Education*. London: Continuum. Pp45-61.

Davis, B. (1996). '*Teaching Mathematics: Toward a sound Alternative*.' New York: Garland Publishing Inc.

Davies, M. (2009). 'Thinking Skills and Capabilities within the Curriculum'. *General Teaching Council for NI TermTalk*. 1(1), pp8- 9. [Online] Available at: https://www.gtcni.org.uk/publications/uploads/document/N112391_Termtalk_FINAL2.pdf (accessed 13/10/2018)

Diener, E. and Crandall, R. (1978). '*Ethics in Social and Behavioural Research'*. Chicago: University of Chicago press.

DfE. (2014). '*Statutory Framework for the Early Years Foundation Stage. Setting Standards for Learning Development and Care for Children from Birth to Five'*. London: DfE.

Dole, S. (2018). 'Creativity in Education: A Global Concern'. *Global Education Review*,5(1),pp1-4.

Dowling, M. (2005). *'Young Children's Personal, Social and Emotional Development.*' 2nd ed. London: Paul Chapman Publishing.

Driscoll, M.P. (2005). '*Psychology of learning for instruction'*.3rd ed. Boston: Allyn and Bacon.

ETI. (2018). '*Chief Inspectors Report 2016-2018'*. Northern Ireland: ETI. Available online at: https://www.etini.gov.uk/sites/etini.gov.uk/files/publications/cir-2016-2018_1.pdf [accessed 01/12/2018].

Ephgrave, A. (2018). '*Planning in the Moment with Young Children: A Practical Guide for Early Years Practitioners and Parents'.* London: Routledge.

EYCG. (1989). '*Early Childhood Education: The Early Years Curriculum and the National Curriculum'*. Stoke-on-Trent: Trenthan Books.

Feeney, S., Christensen, D. and Moravcik, E. (2006). *'Who Am I in the Lives of Children?*' 7th ed. New Jersey: Pearson Education.

Fraser, S. and Gestwicki, C. (2002). *'Authentic Childhood. Experiencing Reggio Emilia in the Classroom'.* New York: Delmar Thompson Learning.

French, G. (2012). 'The HighScope Approach to Early Learning.' In: M. Mhic Mahuna and M. Taylor, (eds.), *Early Childhood Education and Care: An Introduction for Students in Ireland*, 1st ed. Dublin: Gill and McMillian. pp. 127-134.

Froebel, F. (1898/2005). '*The Education of man'*. Mineola, NY: Dover Publications Inc.

Gardener, H. (1983). '*Frames of the Mind: The Theory of Multiple Intelligence*.' New York: Basic Books.

Grubb, N.W. and Allen, R. (2010). 'Rethinking School Funding, Resources, Incentive and Outcomes'. *Journal of Educational Change*. 2(1), pp.121-130.

Hakkarainen, P. (2006). 'Learning and Developing in Play'. In J. Einarsdottir, and J. A. Wagner, (eds.), *Nordic Childhoods and Early Education: Philosophy, Research, Policy and Practice in Denmark, Finland, Iceland, Norway, and Sweden.* 1st ed. Greenwich: IAP. pp. 183-222.

Haq, M. (2014). 'A comparative analysis of qualitative and quantitative research methods and a justification for use of mixed methods in social research.' *University of Bradford School of*

Management. pp1-22 Available Online at: **https://bradscholars.brad.ac.uk/bitstream/handle/10454/7389/MethodsReviewArticle-Dec24-2015-reposit.pdf?sequence=3&isAllowed=y** [accessed 15/11/2018]

Hargreaves, D. (2012). 'What Do We Mean By Creativity and Creative Thinking'? In: H. Fumoto, S. Robson, S. Greenfield, and D. Hargreaves, (eds.),*Young Children's Creative Thinking*, 1st ed. London: SAGE. Pp.15-26.

Haughton, C. and Ellis, C. (2016). 'Play'. In: I Palaiologou, (ed.), *The Early Years Foundation Stage Theory and Practice.* 3rd ed. London: SAGE. Pp. 130-147.

Hendy, L. (2003). 'It is Only a Story, isn't it? Interactive Story Making in the Early Years Classroom'. In: D. Whitebread, (ed.), *Teaching and Learning in the Early Years*, 2nd ed. London: Routledge. Pp.137-156.

Holt, N. (2010). *'Bringing the High/ Scope Approach to your Early Years Practice'.* 2nd ed. New York: Routledge.

Houser, N.E., Roach, L., Stone, M.R., Turner, J. and Kirk, S. (2016). 'Let Children Play: Scoping Review on the Implementation and Use of the Loose Parts for Promoting Physical Activity'. *AIMS Public Health*, 3(4), pp781-799.

Hughes, M.M. (1981). '*Motivation and Function of Play in Early Childhood*'. Unpublished Thesis for Degree of Doctor of Philosophy: University of Keele.

Hunter, T. and Walsh, G. (2014). 'From Policy to Practice? The Reality of Play in the Primary School in Northern Ireland.' *International Journal of Early Years Education.* 22(1), pp.19-36.

Hutt, S.J., Tyler, S., Hutt, C. and Christopherson, H. (1989). *'Play, Exploration and Learning. Natural History of the Pre-School'*. London: Routledge.

Hyvonen, P.T. (2011). 'Play in the School Context? The Perspectives of Finnish Teachers'. *The Australian Journal of Teacher Education.* 36(8), pp 49-67.

Kerlinger, F.N. (1970). '*Foundations of Behavioural Research'*. New York: Holt, Rinehart and Winston.

Kervin, L. and Vernenikina, I. (2018). 'Children at Play: Digital Resources in Home and School Contexts.' In: G. Goodliff, N. Canning, J. Parry and L. Miller, (eds.), *Young Children's Play and Creativity. Multiple Voices.* 1st ed. New York: Routledge. Pp96-110.

Kvale, S. (1996). '*Interviews: An Introduction to Qualitative Research Interviewing'*. London: SAGE Publications.

Lambert, K. (2018). '*From the Field: Budget cuts are ruining the classroom'*. Online. Educational World. Available at: https://www.educationworld.com/field-budget-cuts-are-ruining-classroom [accessed 28/11/2018]

Langston, A. and Abbott, L. (2005). 'Learning to Play, Playing to Learn: Babies ad Young Children Birth to Three'. In: J. Moyles, (ed.), *The Excellence of Play*, 2nd ed. Berkshire: Open University Press. Pp27-38.

Lester, S. and Russell, W. (2010.) '*Children's Right to Play: An Examination of the Importance of Play in the Lives of Children Worldwide'. Working Paper No. 57*. The Netherlands: Bernard van Leer Foundation.

Lincoln, Y.S. and Guba, E.G. (1985). '*Naturalistic Inquiry'*. Beverly Hills: Sage Publications.

Luna, E., Ernst, J., Clark, A., DeLuca, W.V. and Kelly, D. (2018). 'Enhancing Classroom Creativity'. *Technology and Engineering Teacher*, 77(6), pp26-31.

Marsden, S. (2012). 'Thinking Skills'. In: P. Beckley, (ed.), '*Learning in Early Childhood*', 1st ed. London: SAGE. pp 107-118.

Maslow, A. H. (1943). 'A Theory of Human Motivation'. *Psychological Review*, 50(4), pp.370-96.

Matthews, B. and Ross, L. (2010). '*Research Methods: A Practical Guide for the Social Sciences*.' Essex: Pearson Education LTD.

Meckley, A. (2002). '*Observing Children's Play: Mindful Methods*.' Paper presented to the International Toy Research Association. London.

Miller, E. and Almon, J. (2009). '*Crisis in the Kindergarten: Why children need play in School'*. College Park, MD: Alliance for Children.

Moyles, J. (2005). 'Setting the Play Context: Introduction'. In: J. Moyles, (ed.*), The Excellence of Play*, 2nd ed. Berkshire: Open University Press. Pp1-12.

Moyles, J. (2010). '*Just Playing?*' Milton Keynes: Open University Press.

Nahmad-Williams, L. (2012). 'Approaches to Play'. In: P. Beckley, (ed.), *Learning in Early Childhood*, 1st ed. London: SAGE. pp 107-118.

National Advisory Committee on Creative and Cultural Education (NACCCE). (1999). '*All Our Futures; Creativity, Culture and Education'*. London: DFEE.

Nicholson, S. (1971). 'How Not to Cheat Children: The Theory of Loose Parts'. *Landscape Archit*, 62(1), pp30-34.

Nutbrown, C. (2006). '*The Threads of Thinking. Young Children and the Role of Early* Education'.3rd ed. London: SAGE.

O'Flaherty, J. (1995). '*Intervention in the Early Years: An Evaluation of the HighScope Curriculum'*. London: National Children's Bureau.

Oxford. (2018). *'Oxford Dictionaries'*. [Online]. Available at: https://www.oxforddictionaries.com/ [accessed 01/10/2018]

Palaiologou, I. (2016). '*Child Observation: A Guide for Students of Early Childhood.*' London: SAGE Learning Matters.

Papatheodorou, T., Luff, P. and Gill, J. (2011). '*Child Observation for Learning and Research'*. Essex: Pearson.

Papatheodorou, T. and Potts, D. (2016). 'Pedagogy in Practice', In I, Palaiologou, (ed.), *The Early Years Foundation Stage Theory and Practice*, 3rd ed. London: SAGE. Pp.111-129.

Pring, R. (2015). '*Philosophy of Educational Research'*. 3rd ed. London: Bloomsbury Academic.

Punch, K.F. and Oancea, A. (2014). '*Introduction to Research Methods in Education'*. 2nd ed. London: SAGE.

Riley, J. (2007). 'The Child, the context and early childhood education'. In: J. Riley, (ed.), *Learning in the Early Years*, 2nd Ed. London: SAGE. Pp.1-16.

Roberts, V. (1971). '*Playing, Learning and Living'*. London: A&C Black LTD.

Robson, S. (2012). 'Children's Experiences of Creative Thinking'. In: H. Fumoto, S. Robson, S. Greenfield, and D. Hargreaves, (eds.), *Young Children's Creative Thinking*, 1st ed. London: SAGE. Pp. 93-106.

Roeper, G. A. and Ruff, M. (2016). 'Learning and Creativity'. *Roeper Review,* 38(4), pp.222-227.

Rolfe, S. A. and MacNaughton, G. (2010). 'Research as a Tool', In G. MacNaughton, S.A. Rolfe, and I. Siraj-Blatchford, (eds.), *Doing Early Childhood Research. International Perspective on Theory and Practice,* 2nd ed. Berkshire: Open University Press. Pp.3-12.

Santer, J., Griffiths, G. and Goodall, D. (2007). '*Free Play in Early Childhood: A Literature Review'*. London: National Children's Bureau.

Sharp, J. (2012). '*Success with your Education Research Project*'. 2nd ed. London: SAGE.

Schweinhart, L. J., Barnes, H.V., and Weikart, D. P. (1993). *'Significant Benefits: The High/Scope Perry Preschool study through age 27.*' Ypsilanti, MI: High/Scope Press.

Shively, K., Stith, K.M. and Rubenstein, L.D. (2018). 'Measuring What Matters: Assessing Creativity, Critical Thinking and the Design Process'. *Gifted Child Today*, 41(3), pp.149-258.

Silverman, D. (1985). '*Qualitative Methodology and Sociology: Describing the Social World.*' Brookfield: Gower Publishing LTD.

Singer, D. and Singer, J. (1990). '*The House of Make Believe'*. Cambridge: Harvard University Press.

Suggate, S. P., Schaughency, E.A., and Reese, E. (2013). 'Children learning to read later catch up to children reading earlier'. *Early Childhood Research Quarterly*, 28 (1), pp.33-48.

Suter, W. N. (2011). '*Introduction to Educational Research: A critical Thinking Approach'*. 2nd ed. Atlanta: SAGE.

Sylva, K., Bruner, J.S. and Genova, P. (1976).'The Role of Play in the Problem Solving of Children aged 3-5. In: J.S Bruner, A. Jolly, and K. Sylva, (eds.), *Play: It's role in Development and Evolution*.1st ed. Glasgow: Penguin.

Tassoni, P. and Hucker, K. (2000). '*Planning Play and the Early Years'*. Oxford: Heinemann Educational Publishers.

The National Strategies Early Years. (2009). *'Learning, Playing and Interacting: Good practice in the Early Years Foundation Stage'*. Nottingham: DCSF Publications. Available online at: https://dera.ioe.ac.uk/2412/7/85679136be4953413879dc59eab23ce0_Redacted.pdf [accessed 1/12/18]

Theobald, M., Danby, S., Einarsdottir, J., Bourne, J., Jones, D., Ross, S., Knaggs, H. and Carter-Jones, C. (2015). 'Children's Perspectives of Play and Learning for Educational Practice'. *Educational Sciences*, 5(4), pp.345-362.

Thomas, N. (1994). 'Child-centred or subject-centred?' *New Era in Education*, 75(2), pp. 30–43.

Thornton, L and Brunton, P. (2009). *'Understanding the Reggio Approach. Early Year education in Practice*. 2nd ed, Abingdon: Routledge.

Tuckerman, B.W. (1972). '*Conducting Educational Research'*. New York: Harcourt Brace Jovanovich.

Venville, Grady. J. (2002). 'Enhancing the Quality of Thinking in Year 1 Classes'. In: M. Shayer and P. Adey, (eds.), *Learning Intelligence: Cognitive Acceleration Across the Curriculum From 5 to 15 years.* 1st ed. Buckingham: Open University.

Vygotsky, L. (1978). '*Mind in Society: The Development of Higher Mental Process'*. Cambridge, MA: Harvard University Press.

Walliman, N. (2005). '*Your Research Project'*. 2nd ed. London: SAGE Publications.

Walsh, G. (2016). 'A Northern Ireland Perspective'. *Early Education Journal*, 78(1), pp 7-9.

Walsh, G., Murphy, P. and Dunbar, C. (2007). '*Thinking Skills in the Early Years: A Guide for Practitioners'*. Belfast: Stranmillis University.

Walsh, G., Sproule, L., McGuiness, C., Trew, K., Rafferty, H. and Sheehy, N. (2006). 'An appropriate curriculum for 4–5-year-old children in Northern Ireland: comparing play-based and formal approaches'. *Early Years*, 26 (2), pp. 201-221.

Walsh, G., Sproule, L., McGuiness, C., and Trew, K. (2010). 'Implementing a Play-based and Developmentally Appropriate Curriculum in Northern Ireland Primary Schools: What lessons have we learned?' *Early Years*, 30(1), pp. 53-66.

Webster, R. (2018). '*It's official: school budget cuts have finally caught up with teaching assistants'*. [Online] IOE London. Available at: https://ioelondonblog.wordpress.com/2018/06/28/its-official-school-budget-cuts-have-finally-caught-up-with-teaching-assistants/ [accessed 29/11/2018]

Wellington, J. (2015). '*Educational Research'*. 2nd Ed. London: Bloomsbury Academic.

Whitebread, D. (2003). 'Introduction: young children learning and early years teaching'. In: D. Whitebread, (ed.), *Teaching and Learning in the Early Years'*, 2nd ed. London: Routledge. Pp.1-24.

Whitebread, D. (2012). *The Importance of Play. Report on The Value of Children's Play with a Series of Policy Recommendation*. Belgium: Toy Industries of Europe (TIE). [Online] Available at: http://www.importanceofplay.eu/IMG/pdf/dr_david_whitebread_-_the_importance_of_play.pdf (accessed 1/11/2018)

Whitebread, D. (2013). '*Too Much Too Soon: The Case for Extending Informal Play-based Education'*. Presented at Parliamentary Lobby 30 October 2013. Available online at: https://www.toomuchtoosoon.org/uploads/2/0/3/8/20381265/david_whitebread_-_presentation_of_the_evidence_oct_2013.pdf [accessed 13/11/2018]

Whitebread, D. and Jameson, H. (2005). 'Play, Storytelling and Creative Writing'. In: J Moyles, (ed.), *The Excellence of Play*, 2nd ed. Berkshire: Open University Press. Pp.59-71.

Wilkinson, D. and Birmingham, P. (2003). '*Using Research Instruments: A Guide for Researchers'*. London: Routledge Falmer.

Wood, E. and Attfield, J. (2005). '*Play, Learning and the Early Childhood Curriculum'*. 2nd ed. London: Paul Chapman Publishing.

Ye Hwang, S. (2017). ‘Rethinking Creativity: Present in Expression in Creative Learning Communities’. *Educational Philosophy and Theory*, 49(3), pp.220-230.

Yin, R. (1994). ‘*Case Study Research: Design and Method’*. 2nd ed. Beverly Hills: Sage Publicati